KENWOOD

MICRO HI-FI COMPONENT SYSTEM

HM-331

INSTRUCTION MANUAL

KENWOOD CORPORATION

COMPACT disc DIGITAL AUDIO TEXT

B60-4228-00 00 (CH) (M,T) (OC) 9809

⚠ *Caution : Read this page carefully to ensure safe operation.*

Units are designed for operation as follows.

Europe and U.K. ..... AC 230V only
****Other countries.....AC 110-120 / 220-240 V switchable***

For the United Kingdom

Factory fitted moulded mains plug

1.The mains plug contains a fuse. For replacement, use only a 3-Amp ASTA-approved (BS 1362) fuse.

2.The fuse cover must be refitted when replacing the fuse in the moulded plug.

3.Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach.
A power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer. If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent.
Connection to the mains supply.

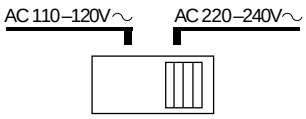
IMPORTANT :
The wires in the mains lead are coloured in accordance with the following code:
Blue : Neutral
Brown : Live
Do not connect those leads to the earth terminal of a three-pin plug.

**For other countries*

AC voltage selection

The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

AC voltage selector switch



Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

Note:
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

Safety precautions

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

The marking of products using lasers (Except for some areas)

CLASS 1
LASER PRODUCT

The marking is located on the rear panel and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous radiation outside the unit.

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Special features

CD player and auto-reverse cassette deck as standard equipment

A CD player and auto-reverse cassette deck are provided, making the unit an integrated micro stereo system for enjoyment of multiple music sources.

Convenient Recording Methods

Various versatile recording functions are provided according to the use purposes.

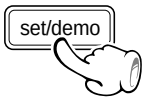
- ●One-touch recording : Recording of one CD or one track by pressing a single key
- ●Program recording : Any desired tracks can be recorded in the desired sequence

Convenient timer functions

Two-program timer : Timer playback, timer recording and AI timer playback can be programmed.
AI timer : When the unit is turned ON by the timer, the sound level increases gradually.
O.T.T. : Timer with easy setting, which operates only once.
Sleep timer : Useful when you want to go asleep while listening to music.

In regard to demonstration

This unit is equipped with a demonstration function (only display). The demonstration consists of sequential change of display and indicators showing the operations, but the audio itself does not change. The demonstration function can be cancelled as follows.



DEMO OFF (To cancel demonstration):
Press the **"set/demo"** key when DEMO is ON.
DEMO ON (To execute demonstration):
After turning power ON, press and hold the **"set/demo"** key (for more than 2 seconds).

- ● Even when DEMO is ON, stations with weak radio waves are muted and their sound cannot be heard.
- ● This operates automatically when a power failure has occurred or the plug of the power cable has been pulled while the power was ON. Cancellation is possible by pressing the key during the demonstration.

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.
We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

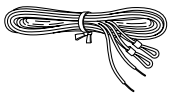
Accessories

Please confirm that the following accessories are present.

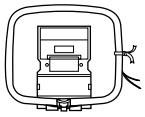
FM indoor antenna (1)

Europe, and U.K.

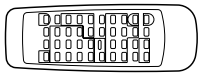
Other countries



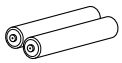
Loop antenna (1)



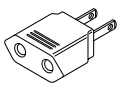
Remote control unit (1)



Batteries (R6/AA) (2)



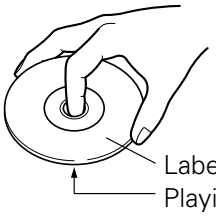
***AC plug adaptor (1)**



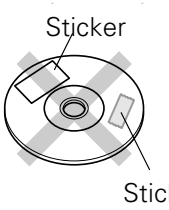
*Use to adapt the plug on the power cord to the shape of the wall outlet. (Accessory only for regions where use is necessary.)

Handling of discs

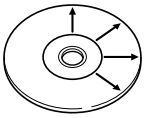
Disc handling precautions



Handling
Hold the discs so that you do not touch the playing surface.



Do not attach paper or tape to either the playing side or the label side of the discs.



Cleaning
If fingerprints or foreign matter become attached to the disc, lightly wipe the disc with a soft cotton cloth (or similar) from the center of the disc outwards in a radial manner.

Storage
When a disc is not to be played for a long period of time, remove it from the player and store it in its case.

Discs which can be played with this unit

CD (12 cm, 8 cm), and the audio part of CDV, CD-G, CD-EG and CD-EXTRA.
Use discs that comply with the IEC standard, for example a disc carrying the COMPACT disc DIGITAL AUDIO marking on the label surface.

Never play a cracked or warped disc

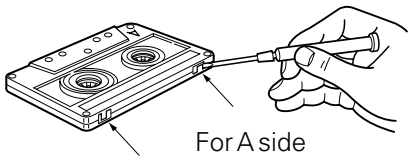
During playback, the disc rotates at high speed in the player. Therefore, to avoid danger, never use a cracked or deformed disc or a disc repaired with tape or adhesive agent.
Please do not use discs which are not round because they may cause a malfunction.

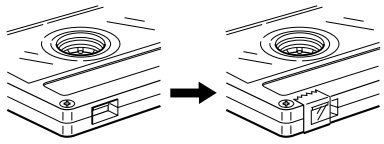
Disc accessories

The disc accessories (stabilizer, protection sheet, protection ring, etc.) which are marketed for improving the sound quality or protecting discs as well as the disc cleaner should not be used with this system because they may cause malfunction.

Notes on cassette tape

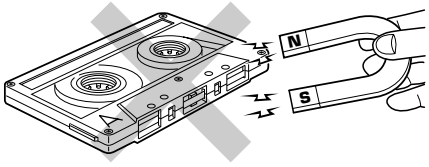
Safety tab (accidental erasure prevention tab)
After an important recording has been finished, break the safety tab, to prevent the recorded contents from being erased or recorded on accidentally.



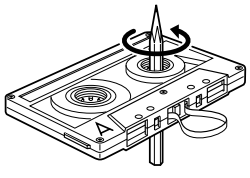


To re-record Apply tape only to the position where the tab has been removed.

To store cassette tapes
Do not store the tapes in a place which is subject to direct sunlight, or near equipment that generates heat. Keep the cassette tapes away from any magnetic field.



When there is slack in the tape
In such a case, insert a pencil into the reel hole and wind the reel hub to remove the slack.



Notes

1. Longer tape than 110 minutes cassette tape
Since longer tape than 110 minutes cassette tape is very thin, the tape could adhere to the pinch roller or be easily broken. It is recommended that these tapes not be used with this unit to prevent possible damage.

2. Endless tapes
Do not use an endless tape, as this could damage the mechanism of the unit.

Connection of the System Accessories

This figure shows the method of connection between the main unit and provided accessories.

CAUTION Note on Connection

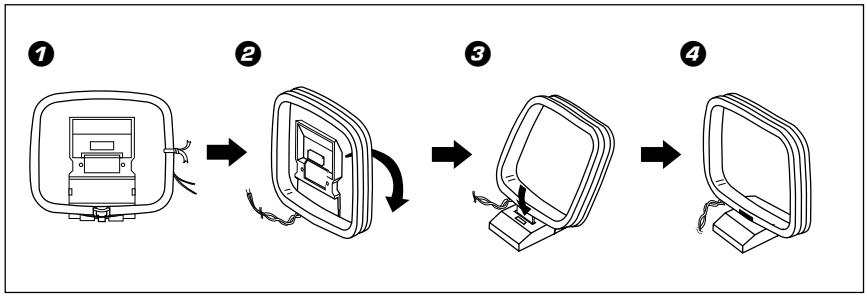
Connect the components as shown in the diagram.
Only plug the power cord into a power outlet once connections are completed.

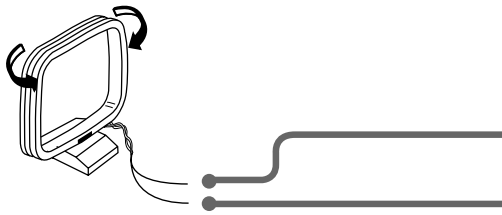
Malfunction of microcomputer

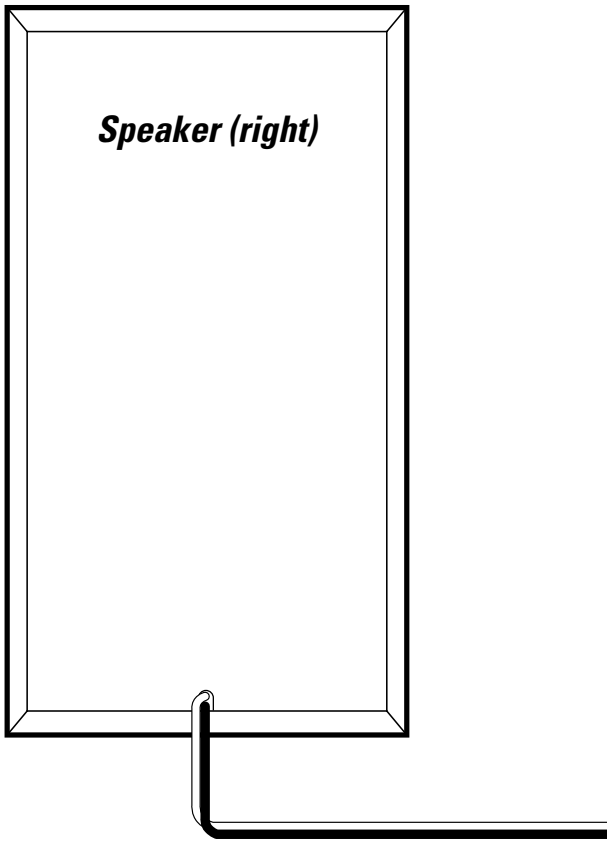
If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty". → 44

AM loop antenna

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.



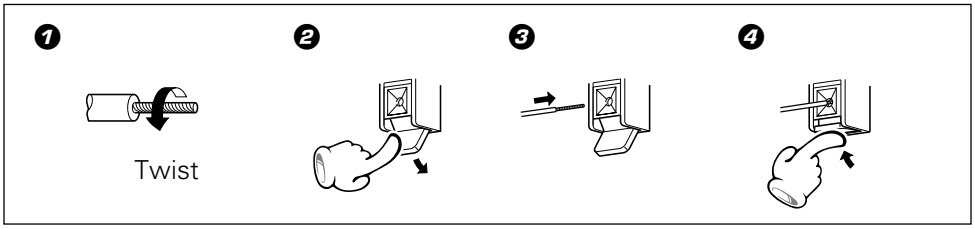




Notes

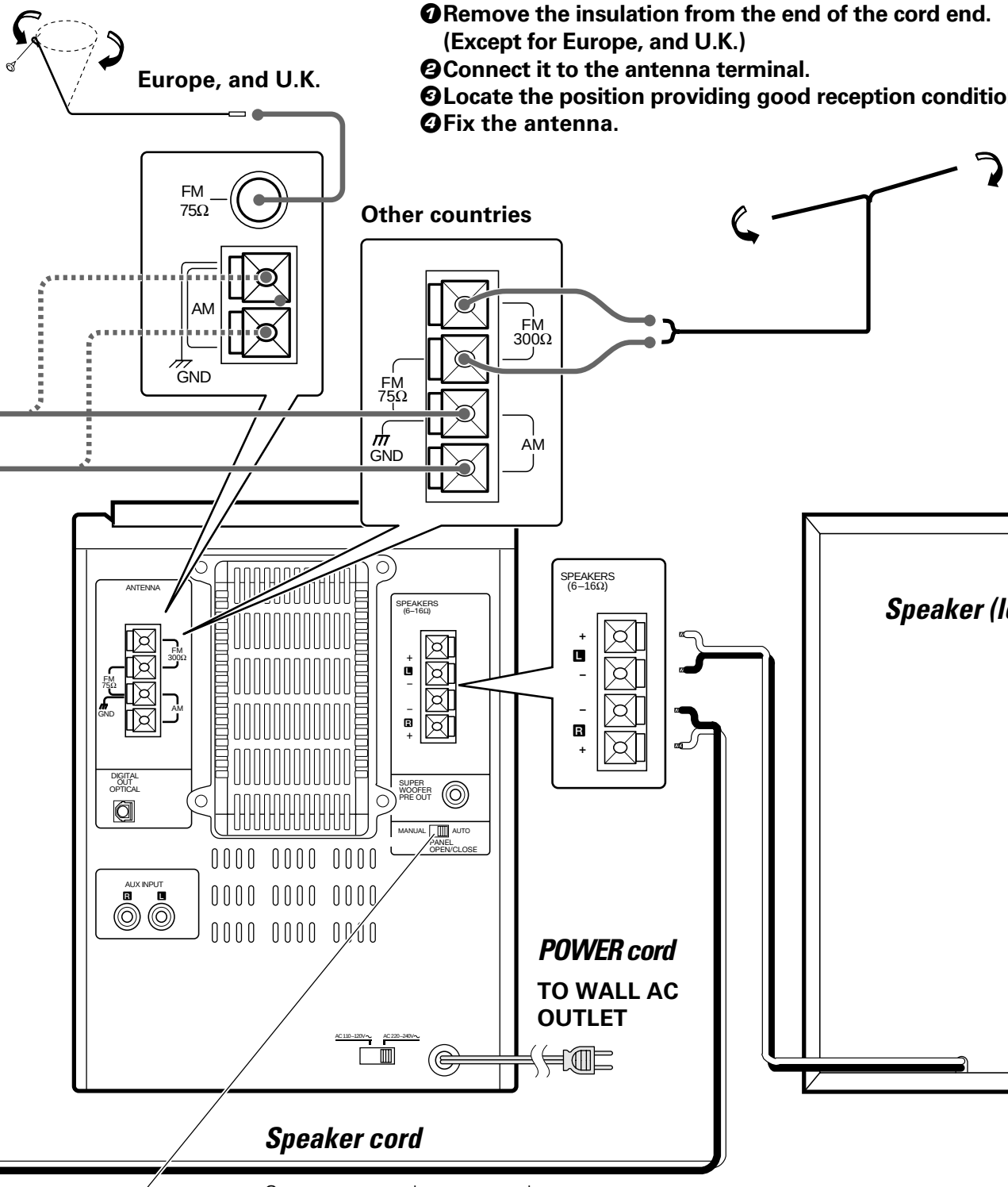
1. Never short-circuit the **"+"** and **"-"** speaker cords.
2. If the left and right speaker connections or the **"+"** and **"-"** polarity are inverted, the sound will be unnatural with unclear positioning of musical instruments, etc. Be sure to connect them without mistake.
3. Be sure to insert all connection cords securely. If their connections are imperfect, the sound may not be produced or noise may interfere.
4. Before plugging or unplugging a connection cord, be sure to unplug the power cord from the wall AC outlet. If connection cords are plugged or unplugged with the power cord left plugged in, malfunction or damage may result.

Main Unit



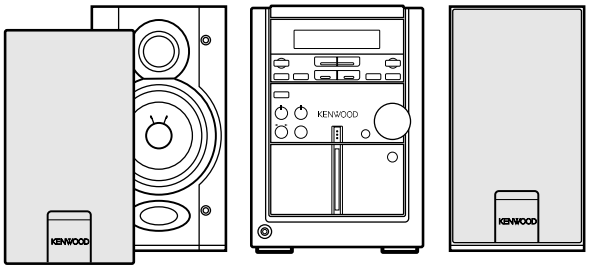
FM indoor antenna

The accessory antenna is for temporary indoor use only. For stable signal reception we recommend using an outdoor antenna. Remove the indoor antenna if you connect one outdoors.



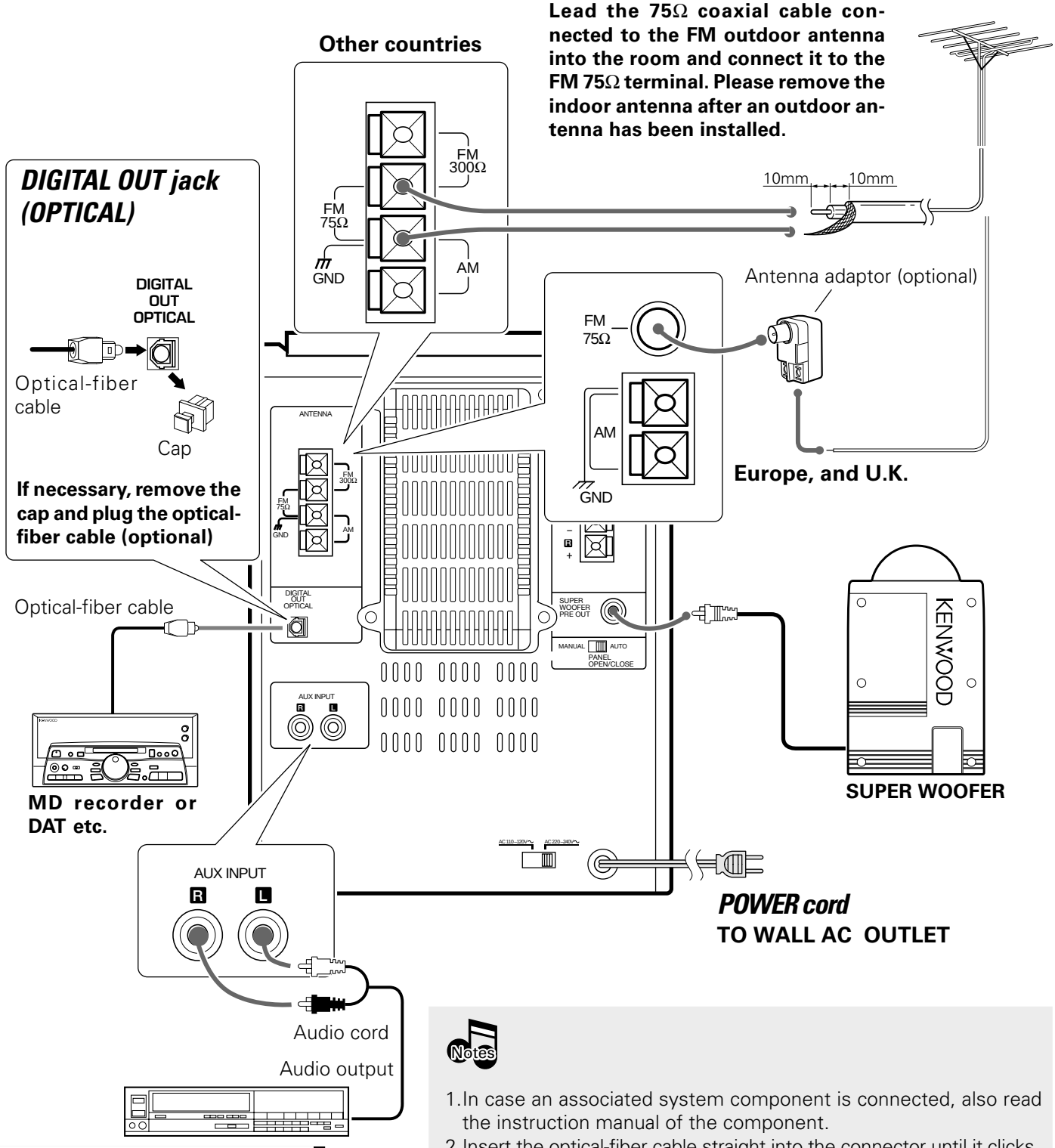
Connect correctly + to + and - to -.

PANEL OPEN/CLOSE switch
Change the operation mode of the "REVOLVING CONTROL PANEL". →11



Connection of Other Accessories *(Commercially Available Parts)*

CAUTION **Note on Connection**
Connect the components as shown in the diagram. Only plug the power cord into a power outlet once connections are completed.

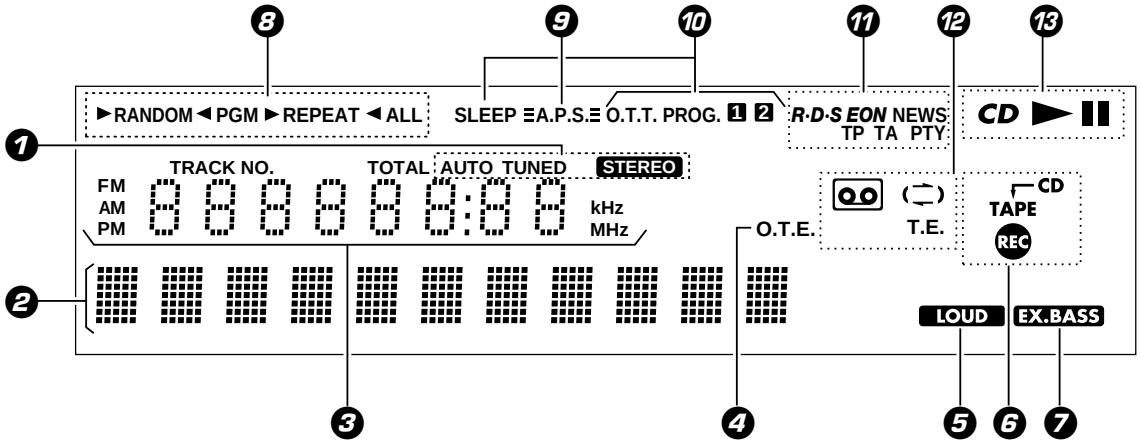


Notes

1. In case an associated system component is connected, also read the instruction manual of the component.
2. Insert the optical-fiber cable straight into the connector until it clicks.
3. Be sure to attach the protection cap when the connector is not used.
4. Never band or bundle the optical-fiber cable.

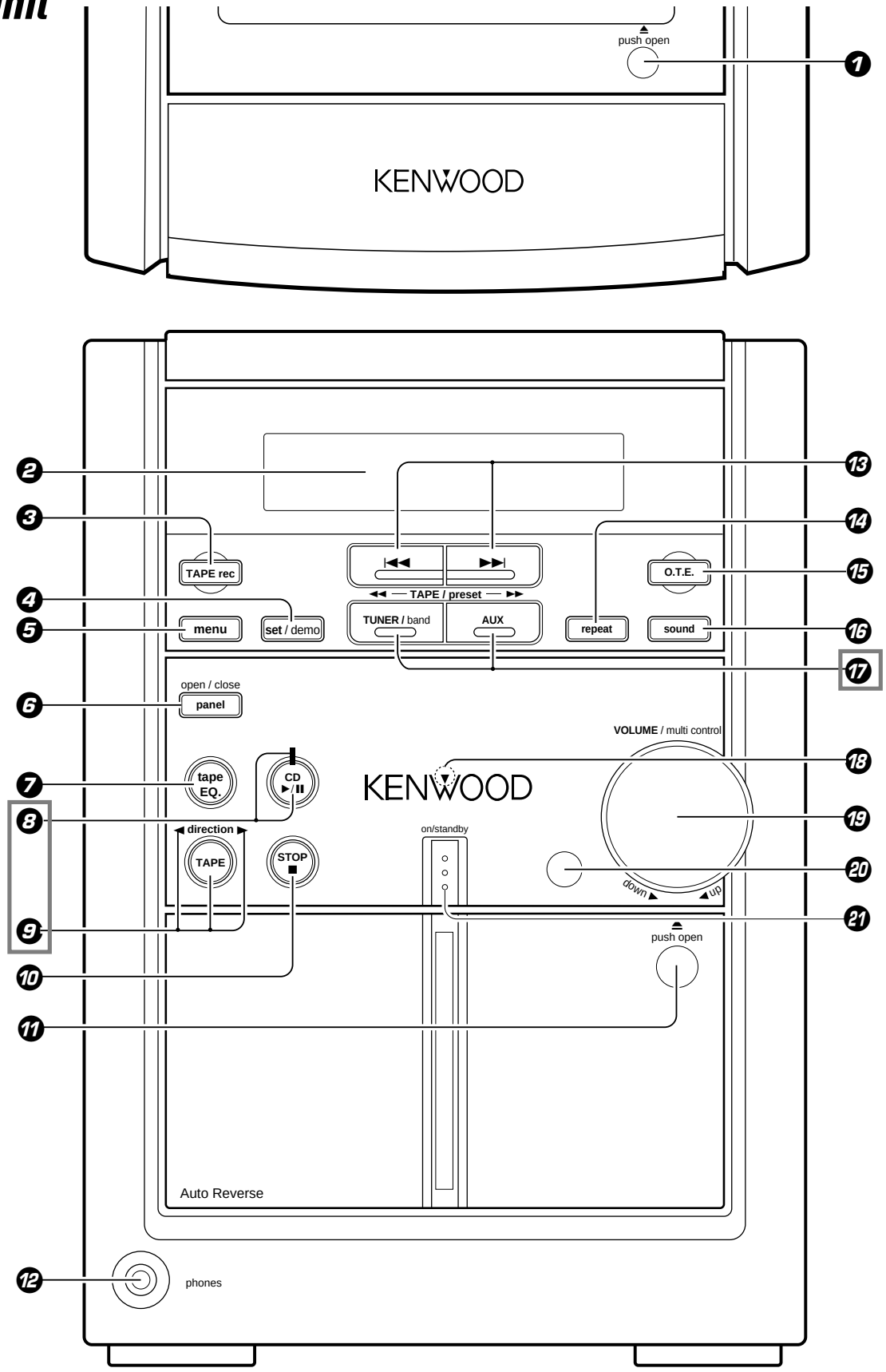
Display

(The displays given in this manual are approximations only. They may differ from what actually appears on the display.)



❶ Tuner-related indicators
❷ Character information display section (dot display)
Shows character information including the input selection, volume level and disc/track title.
❸ Character information display section
Frequency indication, time indication, track No., program No., etc.
❹ O.T.E. (ONE TOUCH EDIT) indication
Appears during one-touch recording.
❺ LOUD (Loudness) indication
❻ TAPE REC indicators
❼ EX.BASS (extra bass) indication
❽ Indication related to CD
❾ Auto Power Save indicator
❿ Timer-related indicators
⓫ RDS-related indication (expect for some areas)
⓬ Cassette deck, reverse mode and TAPE equalizer (T.E.) indicators
⓭ CD play/pause indicators
Indicates the play and pause modes of CD.

Main unit



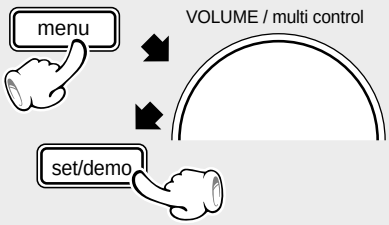
About the one-touch operation function

This unit incorporates the one-touch operation function for the user's convenience. With this function, pressing any key enclosed in ☐ while the unit is in standby mode immediately start playback (or reception).

❶ **CD cover open key (⏏)**
Press to open the CD player cover.
❷ **Display**
❸ **Tape record key (TAPE rec)** →23
Press to start recording. Pressing the key during recording stops it after leaving a non-recorded space (blank) of about 4 seconds.
❹ **"set/demo" key**
Press to set or enter an item selected with the **"VOLUME/ multi control"**.
Used for demonstration ON/OFF.
❺ **"menu" key**
Press to switch the function of the **"VOLUME/multi control (up/down)"** knob.
This key is also used when setting the time of the day.
❻ **"panel open / close" key**
❼ **"tape EQ" key**
❽ **CD play/pause key (CD ►/II)/indicator** →16
Press to select the CD input and start CD playback.
Press during CD playback to let it pause temporarily.
❾ **Tape play key (TAPE)/**
TAPE direction indicator
❿ **Stop key (■)**
⓫ **Cassette holder**
Press the area marked **"⏏ push OPEN"** to load or eject a tape.
⓬ **"phones" jack**
Headphones with a stereo mini plug (optional) can be connected.
⓭ **CD Skip (I◄◄, ►►I)/TAPE (◄◄, ►►) keys** →17 →20
During CD operation :
Press to skip tracks in the forward or backward direction.
During TUNER operation :
Press to receive a preset station.
During TAPE operation :
Press to search in the forward or backward direction.
⓮ **"repeat" key** →25
Used for repeated playback of CD.
⓯ **O.T.E. key**
⓰ **"sound" key** →15
Used for switching the EX.BASS play and LOUDNESS play.
⓱ **"TUNER/band" key** →20
The received broadcasting band is switched.
Press to select the TUNER input.
AUX input key
Press to listen to the input source connected to AUX (analog external).
⓲ **Standby / timer indicator** →14
Light in standby mode of power.
Red :Normal standby mode
Orange :O.T.T. standby
:Program timer standby
Green :Power ON mode
✱ ⓳ **"VOLUME/multi control (up/down)" knob** →14
Normally this is used for volume adjustment.
⓴ **Remote sensor**
㉑ **"on/standby" key**
The system is switched ON and STANDBY.

* About the VOLUME/multi control (up/down) knob

After selecting the function of this knob with the "menu" key, select the desired control item by turning the "VOLUME/multi control (up/down)" knob. To set or enter the setting of the selected item, press the "set/demo" key.



Turning the knob switches the function as shown in the character information display.

→ **TAPE RVS. ?** →19
O.T.E. ? →34
A. MEMORY (or A. PRESET) ? →21
(Only when the TUNER input is selected)
AUX LEVEL ? →37
(Only when the AUX input is selected)
BALANCE ? →36
TIMER SET ? →39
→ **A.P.S. SET ?** →15

- The function of the control knob returns to the normal mode when it has not been operated for 5 seconds.

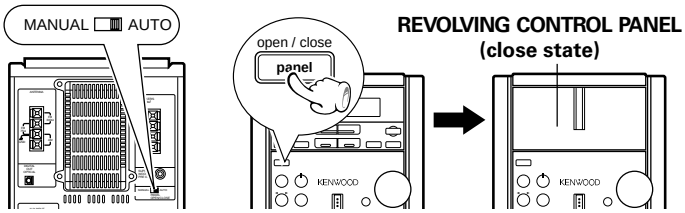
About the REVOLVING CONTROL PANEL

AUTO

- **The REVOLVING CONTROL PANEL is closed when the power supply is in STANDBY mode.**
- **When the power is switched ON, the REVOLVING CONTROL PANEL opens.**
- **When the power is ON, the panel opens and closes alternately each time the "panel open / close" key is pressed.**

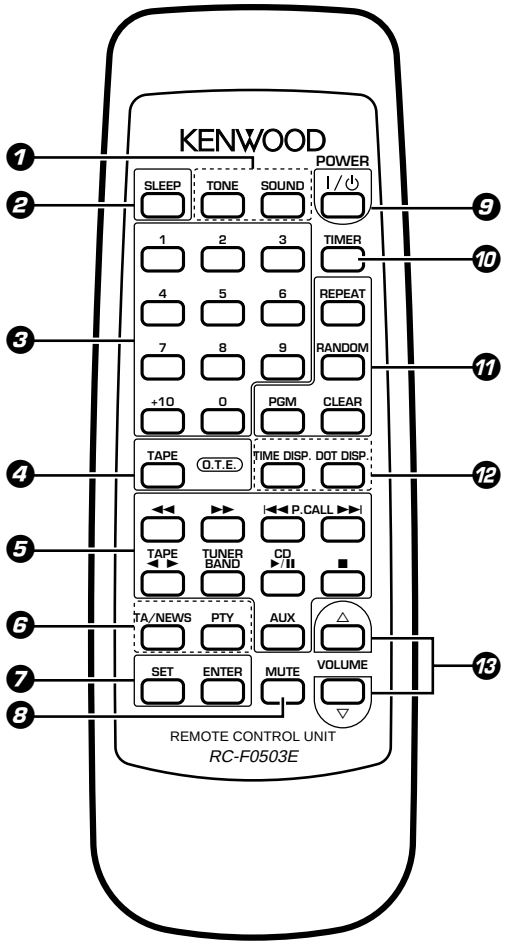
MANUAL

- **When the power is ON, the panel opens and closes alternately each time the "panel open / close" key is pressed.**



Remote control unit

The keys on the remote control unit with the same names as on the main unit have the same function as the keys on the main unit.



Europe, and U.K.
RC-F0503E (Infrared ray system)
Other countries
RC-F0503 (Infrared ray system)

❶ TONE key → 36
This is used to adjust the tone.
SOUND key → 15
Used for switching the EX.BASS play and LOUDNESS play.

❷ SLEEP key → 42
This is used to set the sleep timer.

❸ Numeric keys
These are used to select CD tracks and as preset call keys for the tuner.

❹ TAPE O.T.E. key → 34
These keys are used for recording of a CD onto tape with a one-touch operation.
Press either key during CD playback to record the currently played track onto tape. Press in stop mode to record the entire CD onto tape.

❺ Basic operation keys
Fast forward, fast reverse keys (◄◄, ►►)
During CD or TAPE operation: → 17 → 19
Press to search in the forward or backward direction.
During TUNER operation: → 20
Press to select a radio station.
P.CALL/skip keys (|◄◄, ►►|)
During CD operation : → 17
Press to skip tracks in the forward or backward direction.
During TUNER operation: → 20
Press to select a radio station.
TAPE ◄ ► key
TUNER BAND key
CD ►/II key
Stop key (■)
AUX key

❻ RDS-related keys (For Europe and U.K.)
TA/NEWS key → 31
Used at the time of EON reservation.
PTY key → 29
Used at the time of program type detection.

❼ SET key
Press to set or enter an item selected with the **"VOLUME/ multi control"**.
ENTER key → 21
It is used to enter the preset station memory in the tuner.

❽ MUTE key → 15
This is used to suppress the sound temporarily.

❾ POWER (I/⏻) key → 14 → 42
The system is switched ON and STANDBY.
This key is also used to activate or cancel the timer program execution.

❿ TIMER key → 42
Used to select the timer.

⓫ Keys related to CD
REPEAT key → 25
This is used for repeated playback.
RANDOM key → 26
Playback of the CD tracks in random order.
CLEAR key → 24
The programmed track sequence is cleared.
PGM key → 24
This is used to program the track sequence.
During TUNER operation: → 21
Used to switch the tuning mode between **"AUTO"** (auto tuning, stereo reception) and Manual (manual tuning, monaural reception).

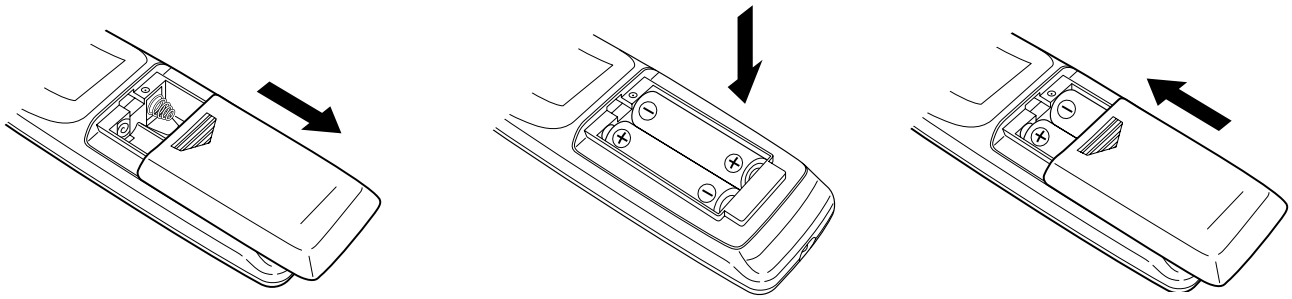
⓬ TIME DISP. key
Press to switch the time information displayed during CD playback.
DOT DISP. key → 27
Used for scroll display of the text infomations of CD-TEXT compatible disc.

⓭ VOLUME (△,▽) keys

Operation of remote control unit

Loading batteries

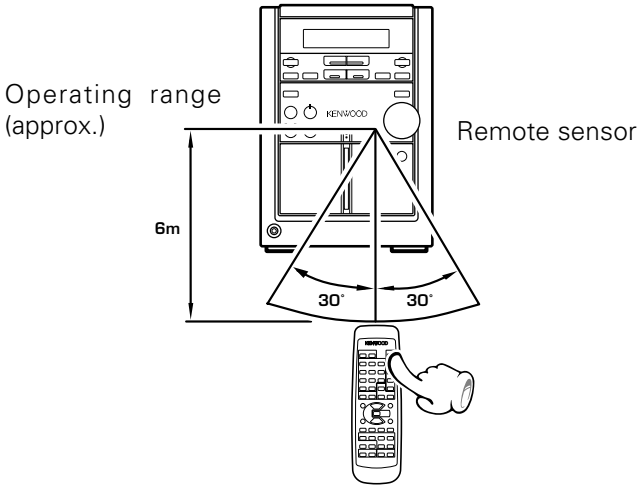
❶ Remove the cover. **❷ Insert batteries.** **❸ Close the cover.**



- Insert two R6 ("AA"-size) batteries following the polarity indications.

Operation

After plugging the power cord of this unit, press the POWER (I/⏻) key of the remote control unit to turn the system ON. When the system is turned ON, press the key of the function to be operated.



- When pressing more than one remote control keys successively, press the keys securely by leaving an interval of 1 second or more between keys.

Notes

1. The provided batteries are intended for use in operation checking, and their service life may be short.
2. When the remote controllable distance becomes short, replace both of the batteries with new ones.
3. If direct sunlight or the light of a high- frequency fluorescent lamp (inverter type, etc.) is incident to the remote sensor, malfunction may occur. In such a case, change the installation position to avoid malfunction.

Channel space switching

(Except for the United Kingdom and Australia)

The space between radio channels has been set to the one that prevails in the area to which the system is shipped. However, if the current channel space setting does not match the setting in the area where the system is to be used, for instance when you move from area 1 or area 2 shown in the following table or vice versa, proper reception of AM/FM broadcasts cannot be expected. In this case, change the channel space setting in accordance with your area by referring to the following table.

Area		CHANNEL Space Frequency
1	USA, Canada and South American countries	FM: 100 kHz AM: 10 kHz
2	Other countries	FM: 50 kHz AM: 9 kHz

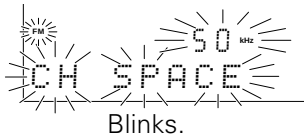
❶ Turn power on.

❷ Press the TUNER/band key

❸ Select the mode by using the "repeat" key.

Each press switches the space frequency alternately.

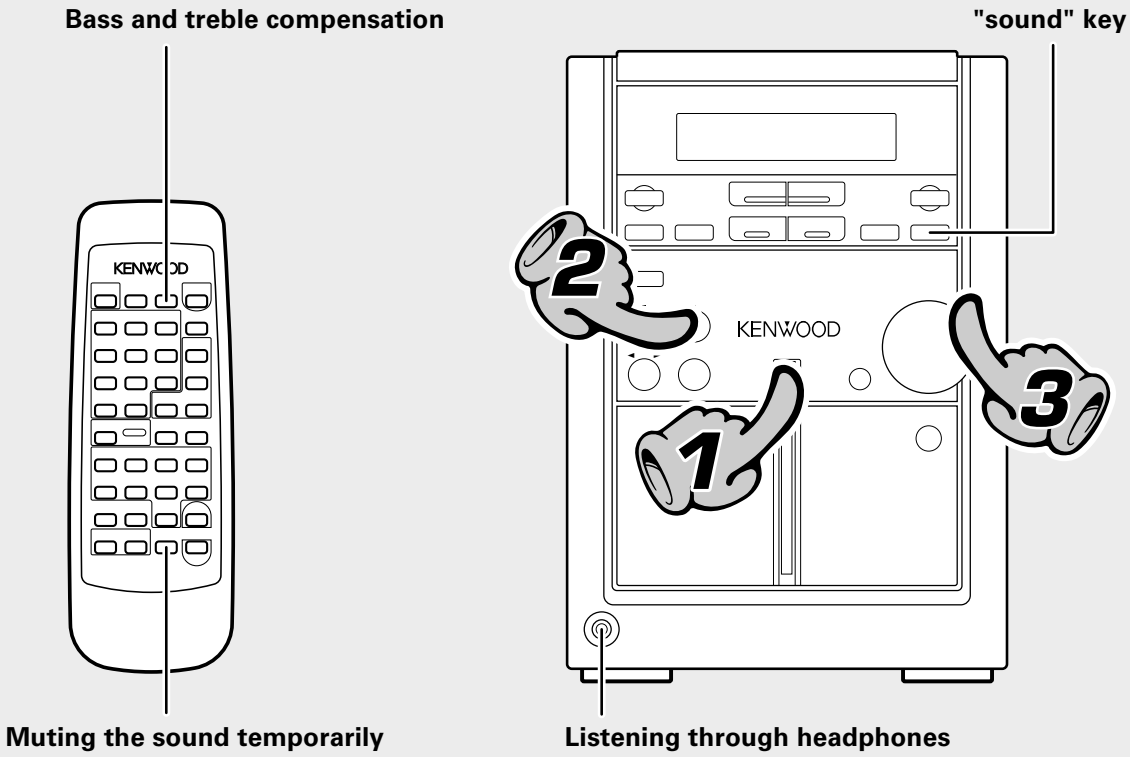
- ❶ **"FM 50 kHz"** (FM 50 kHz, AM 9 kHz)
- ❷ **"FM 100 kHz"** (FM 100 kHz, AM 10 kHz)

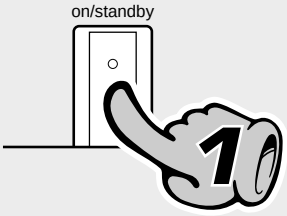


Blinks.

❹ Establish the selection by pressing the "set/demo" key.

Basic use method



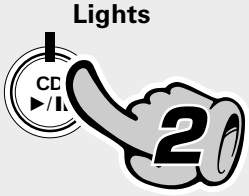


1. Set the "on/standby" key to ON (STANDBY).

When the "on/standby" key (I / ⏻) is pressed while the unit is ON, the unit is switched off.

- Pressing the **CD ►/II**, **AUX**, **TAPE** or **"TUNER/band"** key also turns power on and starts playback (reception) of the corresponding input. (One-touch operation)
- When the **CD** or **TAPE** input is selected while the corresponding disc or tape has been loaded, it immediately starts to play.

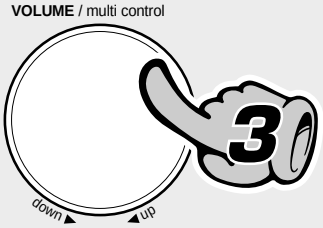
Example:
To select the CD input



2. Selecting the desired output.

TUNER (Broadcasts) → 20
CD → 16
TAPE → 18
AUX (External input) → 8

- Pressing the **CD ►/II**, **AUX**, **TAPE** or **"TUNER/band"** key selects the corresponding input.



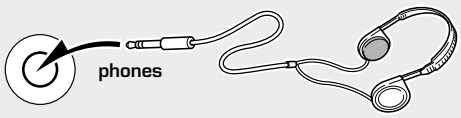
The volume decreases **The volume increases**

3. Volume adjustment.

- Quick turning produces a larger change amount. (Dynamic rotary volume control function)
- The display shows a reference value.

Listening through headphones

Insert the headphone plug into the "phones" jack.



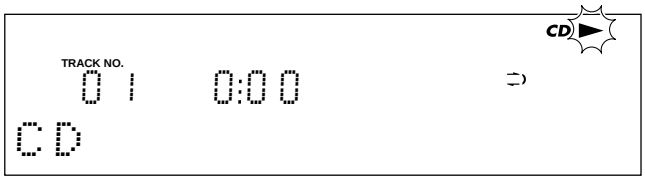
- Headphones with a stereo mini plug can be connected.
- The sounds from all speakers are cut off.

Muting the sound temporarily *(Remote control unit only)*

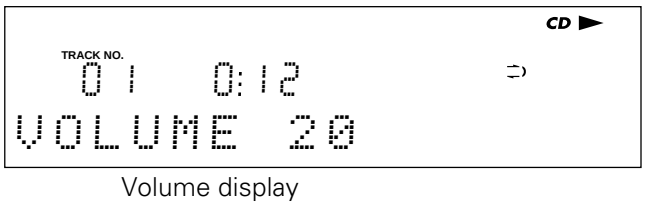
- Press again to resume the original volume.
- This is also cancelled when the volume is changed.

Standby mode

When the standby/timer indicator on the main unit lights in red or orange, a minute current flows for memory protection. This condition is called standby mode.



When CD has been selected.



Volume display

Bass and treble compensation

Each press switches the modes as follows.

① "EX.BASS" (Extra Bass) lights.
The lowest and highest frequencies are enhanced regardless of the current volume level.

② "LOUD" (Loudness) lights.
The lowest and highest frequencies are enhanced according to the current volume level. (Effective during low-volume listening.)

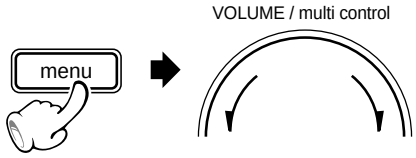
③ Both indicators off.
Sound enhancement mode is disengaged.

- Adjusting the tone while the **"LOUD"** or **"EX.BASS"** indicator is lit turns it off and cancels the sound enhancement mode. → 36

AUTO POWER SAVE function

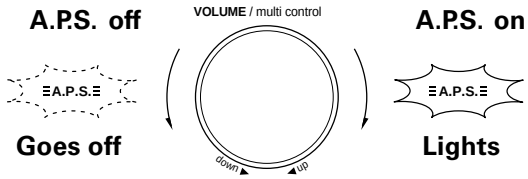
When the unit is ON and the unit is left for 30 minutes with CD and TAPE not operating, the unit is switched off automatically by this function. This is convenient when you forgot to switch off the unit. This function can be activated or deactivated by the following operation.

❶ Select "A.P.S. SET?".

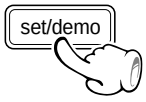


(Press the "set/demo" key while the "?" mark is blinking.)

❷ Select.



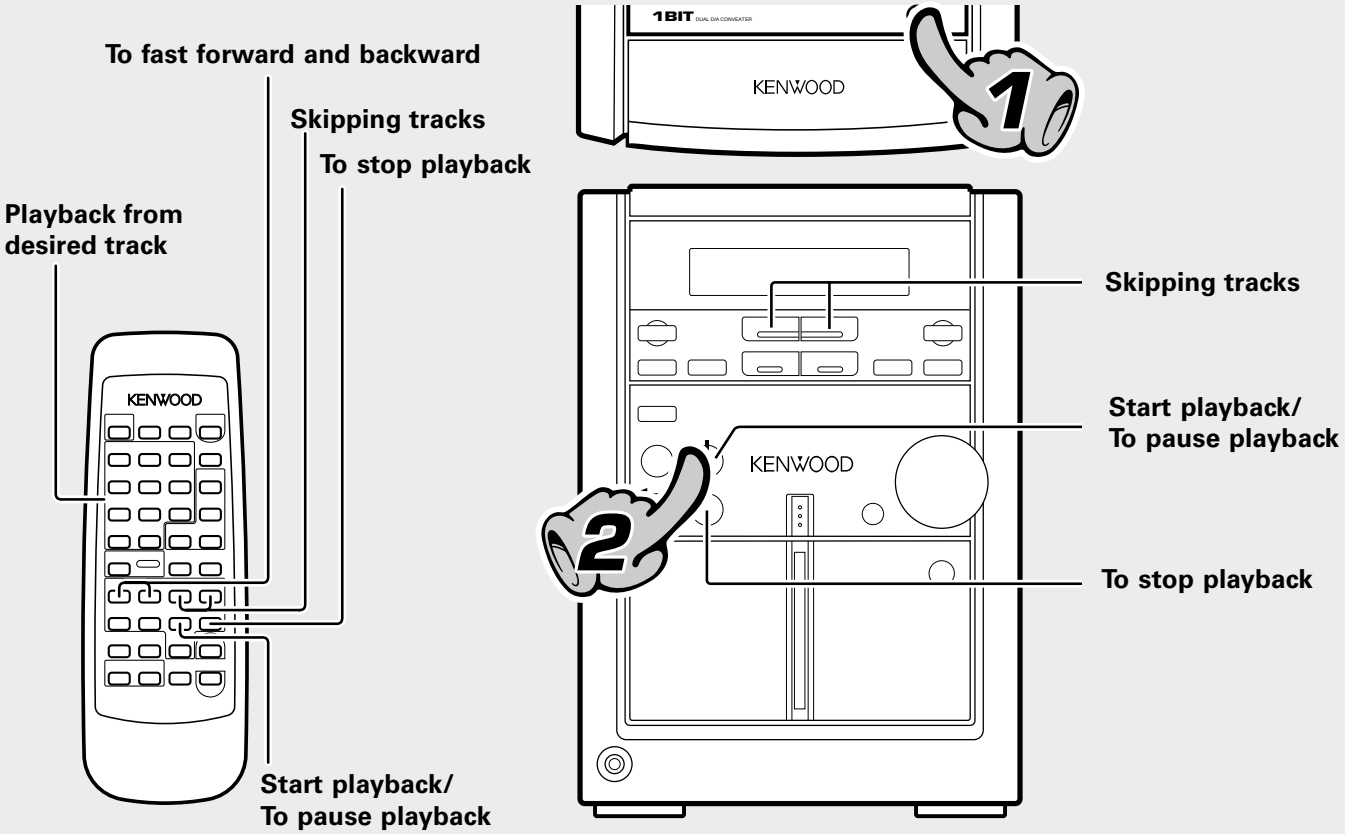
❸ Set it.



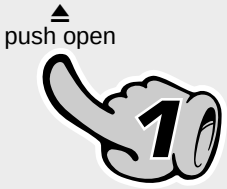
- When the **TUNER** or **AUX** input is selected, **APS** operates only when the volume is set to zero or when **MUTE** is on.

Playback of CD

When a disc is placed into the CD player in advance, the unit will be switched on automatically by pressing the CD ►/II key, and playback will start.



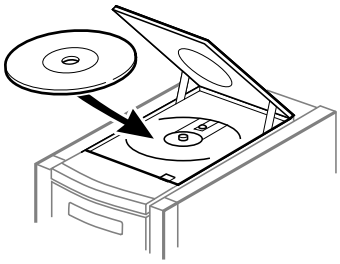
Open the CD cover.



1. Load a disc.

❶ Open the CD cover.
❷ Place a disc.
❸ Close the CD cover.

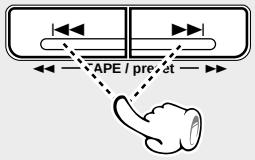
The label side must be on top.



2. Start playback.

Skipping tracks

To skip backward **To skip forward**

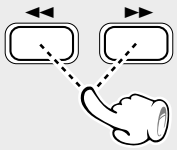


- The track in the direction of the key pressed is skipped, and the selected track will be played from the beginning.
- When the ⏮ key is pressed once during playback, the track being played will be played from the beginning.
- Operation also is possible with the keys ⏮ and ⏭ of the remote control unit.

To fast forward and backward

(Remote control only)

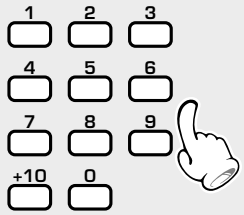
Backward search **Forward search**



- Playback starts from the position where the key is released.

Playback from desired track

Select the desired track No.



Press the numeric keys as shown below....

To select track No. 23 : +10 +10 3

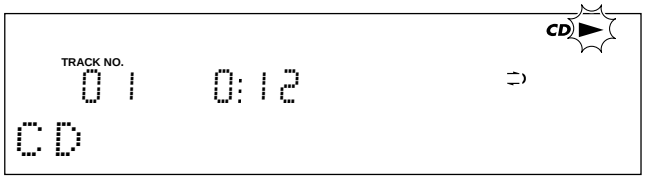
To select track No. 40 : +10 +10 +10 +10 0

To pause playback

- Each press pauses and plays the CD alternately.

To stop playback

- Do not touch the played side of disc.
- Be sure to place a disc horizontally. Placing it with an inclination will result in malfunction.



- Titles are displayed for discs conforming to CD-TEXT.
- After a few seconds, play starts from track No.1.

In regard to CD-TEXT

When discs conforming to CD-TEXT are played with this unit, the text information recorded on the CD (disc name or titles) is displayed automatically.

Time display on CD player

(Remote control unit only)

Each press of the TIME DISP. key changes the displayed contents.

① 1:23 (Elapsed time of track being played)

② -2:37 (Remaining time of track being played)

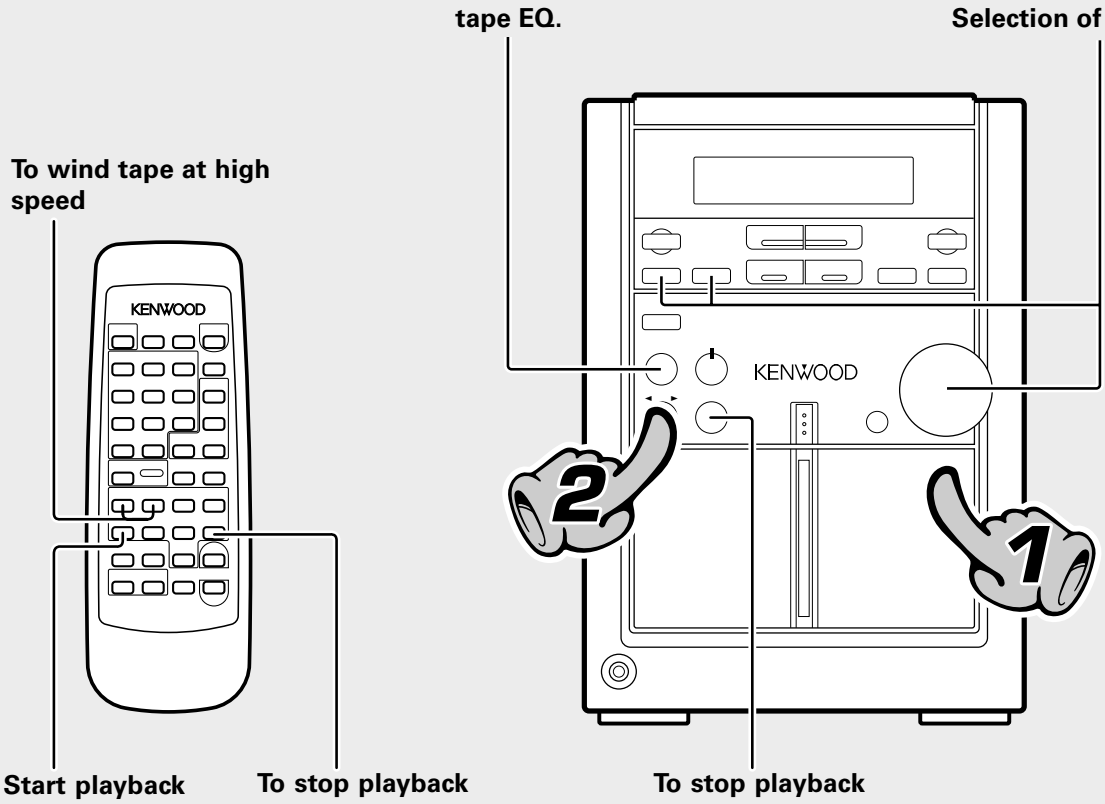
③ TOTAL 23:45 (Elapsed time of entire disc)

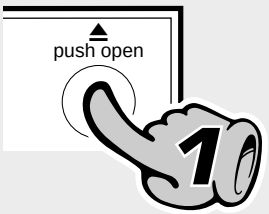
④ -TOTAL 36:15 (Remaining time on entire disc)

- Only time information ① and ② can be displayed during single-track repeated playback or random playback.

Playback of tape

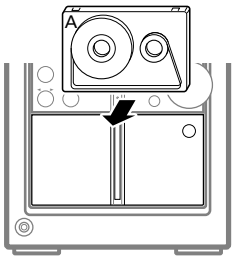
If you load a tape in the cassette deck in advance while the power is off. pressing the TAPE key turns power on automatically and starts the tape playback.





1. Load a cassette tape.

❶ **Open the door.**
❷ **Insert a tape and close the door.**



Transport direction indicators

2. Start playback.

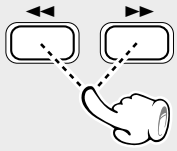
During playback, the tape running direction changes each time the key is pressed.

Transport direction indicators

The "direction" indicators show the current direction in which the tape advances when playback or recording is started automatically by the one-touch operation, etc. This direction is the direction stored in memory when the tape was last stopped.
(To change the tape transport direction, press the TAPE key (◄, ►) during playback then press the stop key (■).)

To wind tape at high speed (remote control only)

To fast wind in direction ⬅



To fast wind in direction ➡

- Press the ■ key to stop fast winding.

Selection of TAPE equalizer (tape EQ.) *(Main unit only)*

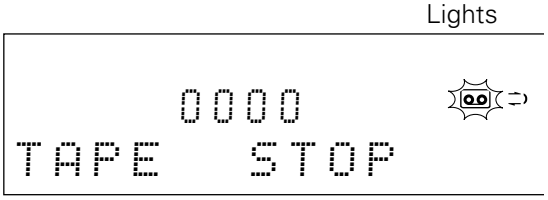
When playing a tape prerecorded with Noise Reduction system (such as the DOLBY NR) ON, be sure to set the "tape EQ." ON for playback.

Lit when "tape EQ." is ON

Each press switches the modes as follows.
① "tape EQ." ON..... TAPE equalizer is used.
② "tape EQ." OFF ..... TAPE equalizer is not used.

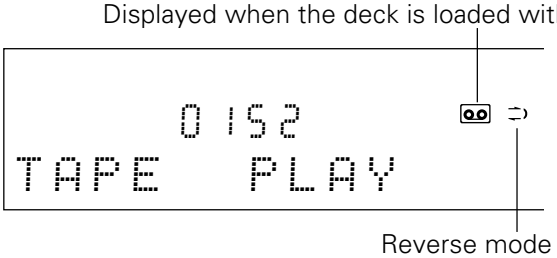
- Select the "tape EQ." ON mode according to the recording condition of the tape.

Lights



- Normal (TYPE Ⅰ), high (TYPE Ⅱ), or metal (TYPE Ⅳ) tape selection is set automatically.
- Remove tape slack before loading.
- Close the door securely.

Displayed when the deck is loaded with a tape.

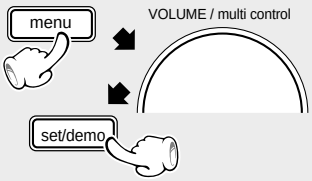


To stop playback

- Do not take out the cassette tape until the tape transport has stopped completely.

Selection of reverse mode *(Main unit only)*

❶Select "TAPE RVS. ?".



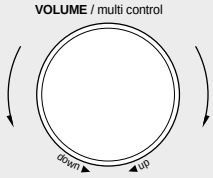
(Press the "set/demo" key while the "?" mark is blinking.)

❷ Select.

Initial setup

"⇄" : (REVERSE)
Both sides are played back (recorded), and then the tape stops.

"⇄": (ONE-WAY)
Only one side is played back (recorded), and then the tape stops.



"(⇄)": (ENDLESS)
Both sides are played back endlessly. (The tape stops after recording onto both sides.)

❸ Set it.

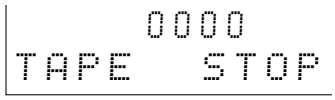
Tape counter display *(Remote control unit only)*

Each press of the TIME DISP. key changes the displayed contents.

① 0000 (Tape count)
② AM 8:45 (Time display)

A tip for use of the tape counter

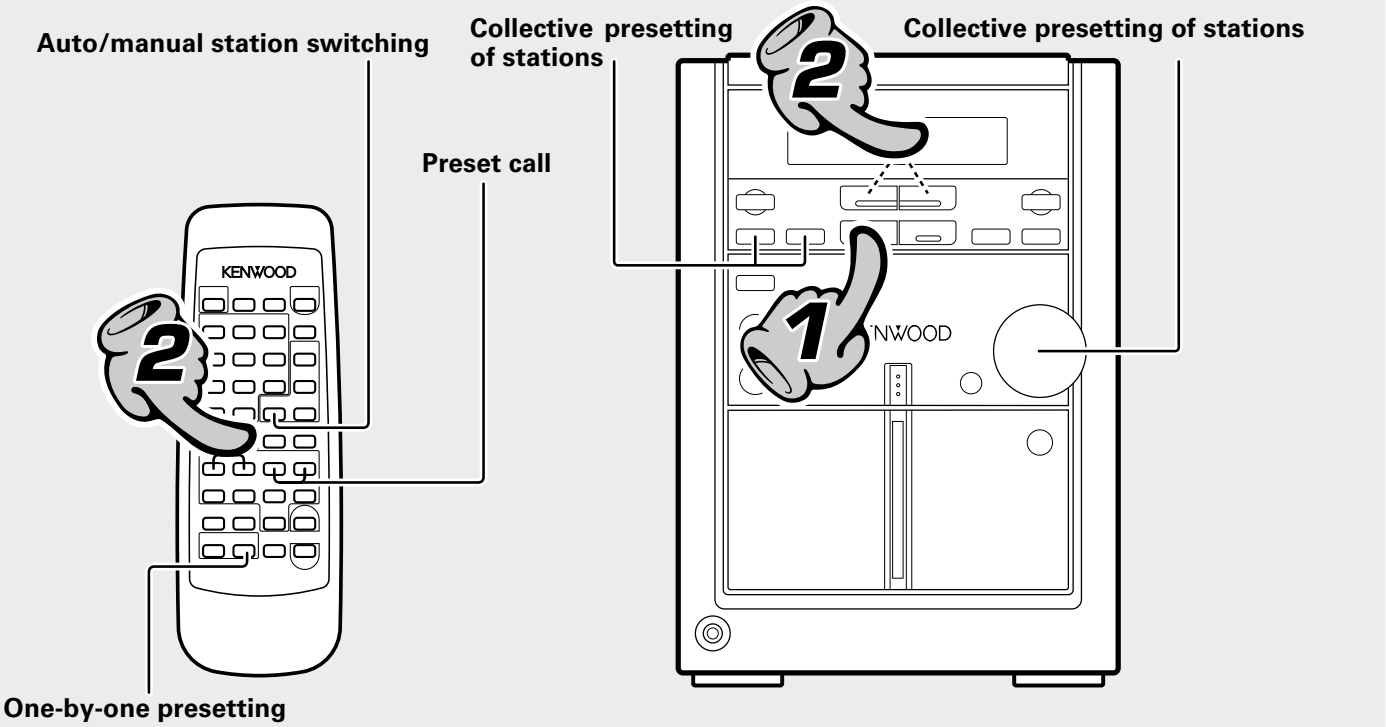
The tape counter is set to "0000" when a cassette tape is loaded.
By writing down the counter reading in case you want to interrupt recording (playback) in the middle of the tape, the memo will be helpful as a reference for locating the same position when continuing the recording (playback) the next time. The tape counter figure decrements during recording or playback of the back side (while the ◄ tape transport indicator is lit).
To set the tape counter to "0000", open the cassette holder once. Then the counter will be reset.

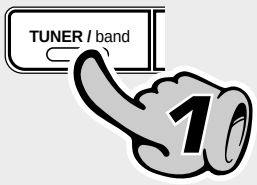


Receiving broadcast station

It is also possible to receive them by one-touch operations by storing up to 40 stations in the preset memory.

When the "TUNER/band" key is pressed, the unit will automatically be switched on and reception status will be reached.

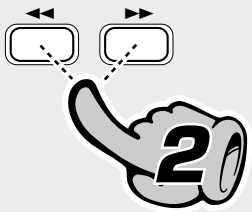




1. Select the broadcast band.

Each press changes the band.
① FM
② AM

Select a station (Remote control only)

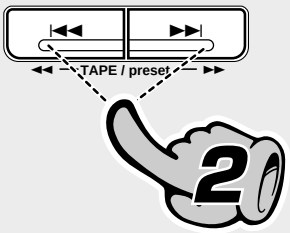


2. Select a station.

When no stations have been memorized

Auto tuning : The next broadcasting station will be received automatically each time this key is pressed.
Manual tuning : Press the key repeatedly or hold it depressed until a station is received.

Select a station



When stations have been memorized (preset call)

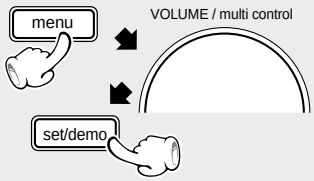
Every time the key (|◄◄ or ►►|) is pressed, the preset stations are switched over as follows.

Press ►►| for the order of 1→2→3 ... 38→39→40→1...
Press |◄◄ for the order of 40→39→38 ... 3→2→1→40...

Collective presetting of stations (auto preset)

❶ Receive a broadcast.

❷ Select "A. MEMORY (or A.PRESET) ?".

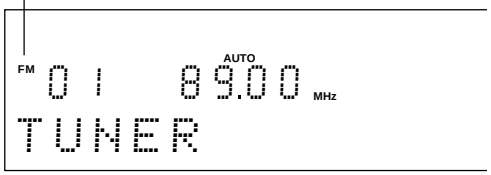


(Press the "set/demo" key while the "?" mark is blinking.)

The display differs according to the equipment (country and area), and **"AUTO PRESET"** also may be shown.

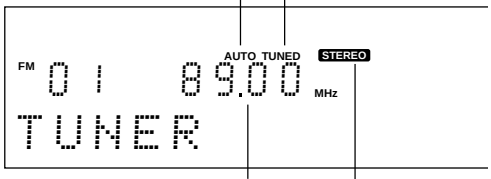
- A maximum of 40 stations of the band presently being received will be preset.
- When there are many stations and the intended station has not been preset, please also use **"One-by-one presetting (manual preset)"**.

Reception band indication



The **"TUNED"** indicator lights when a station is received.

Lights at the time of automatic station selection.



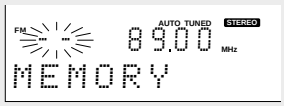
Frequency display

Lights during stereo reception

- When a key is held depressed, preset stations will be skipped at an interval of about 0.5 second.
- Preset stations can be called using the number keys on the remote control unit.

One-by-one presetting (manual preset)

❶ Press the ENTER key during reception.

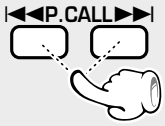


(Proceed to step ❷ while "MEMORY" is lit.)

"MEMORY" lights (for approx. 5 sec.)

❷ Select one of the preset numbers from 1 to 40.

The numbers become smaller



The numbers become larger

❸ Press the ENTER key again.

(Repeat steps ❶,❷,❸ to preset other stations)

- If several stations are preset under the same number, the previous memory is replaced with the latest memory contents.

Tuning mode switching and reception mode (Remote control unit only)

Each press alternates the mode.
① "AUTO" lit
(Auto tuning, stereo reception)
② "AUTO" not lit
(Manual tuning, monaural reception)

Use the manual tuning mode when reception is noisy due to weak reception. (In the manual mode, stereo broadcasts are received in monaural.)

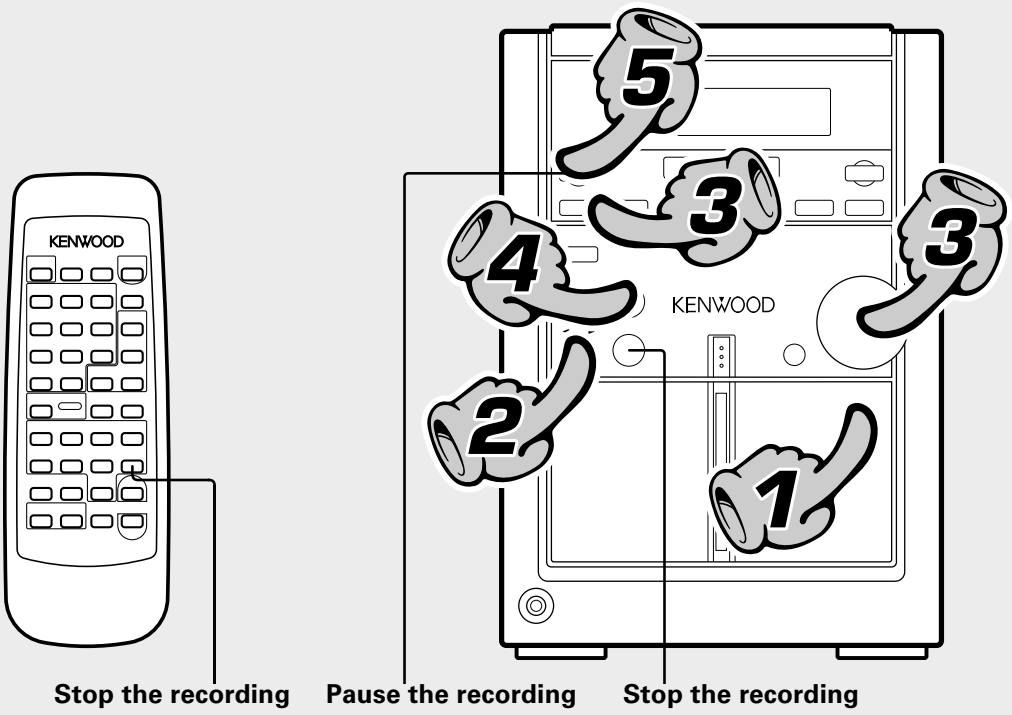
- Normally, use the **AUTO** (Auto tuning, stereo reception) mode.

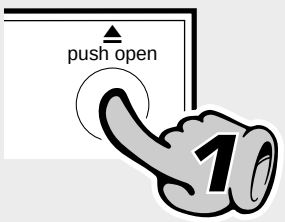
Tuner frequency display (Remote control unit only)

Each press of the TIME DISP. key changes the displayed contents.

Recording on TAPE

Note that this cassette deck cannot record onto Metal tapes.





1. Load a tape in deck.

❶ Open the door of deck.
❷ Insert a tape.
❸ Close the door.

- Differentiation between normal (TYPE Ⅰ) and high (TYPE Ⅱ) tape is set automatically.
- Remove tape slack before loading.

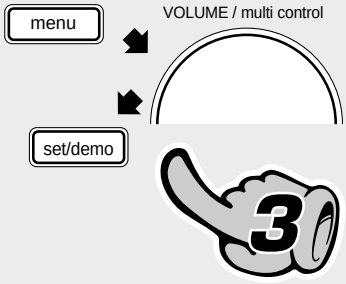
2. Select the tape transport direction.

To reverse the transport direction

❶ Press the play key.
❷ Press the play key again.
❸ Stop playback.

- When recording is started, the tape is transported in the direction selected in this step.
- Wind the tape to the position where recording is to be started.

Check the tape transport direction indicator. → 18



3. Set the recording condition.

Select the reverse mode. → 19

Pause the recording

Blinks

- Press the **"TAPE rec"** key during recording. It stops after leaving a non-recorded blank of 4 seconds. (Press the key again to resume recording.)

Stop the recording

Points in CD recording

When recording CD tracks onto a tape, if you leave the cassette deck in record-pause mode beforehand, the cassette deck recording can be started at the CD starts to be played. (Synchro recording function)

❶ Put the CD player in pause mode.
❷ Select the track to be recorded with the skip (I◄◄, ►►I) keys.
(The CD player pauses at the beginning of the selected track.)
❸ Put the cassette deck in Record-pause mode.
(Press "TAPE rec" key twice)
❹ Start playing the CD.
(Synchro recording starts)

- Recording stops when the stop (■) key of the CD player is pressed.

Select an input source other than "TAPE"

Example:
To select the CD input

Lights

4. Select the source to be recorded.

TUNER (Broadcasts)
CD
AUX (External input)

The character information display shows the recording input source.

- If a CD has already been loaded, it starts to play now. Press the ■ key to stop it.

5. Start recording.

❶ Play (or tune) the input source to be recorded.
❷ Start recording.

- Recording stops automatically when the tape side (s) to be recorded have been fully recorded.

Listening in the desired sequence (program playback)

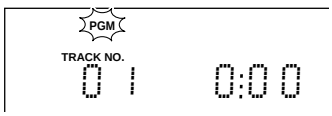
Use the following procedure to program desired tracks in a desired order. (up to 32 tracks)

Select the "CD" input.

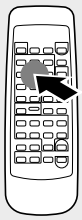
1 Let the "PGM" indicator light.

Press in stop mode

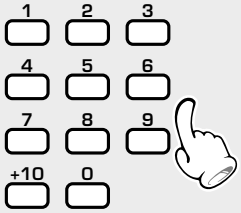
Lights



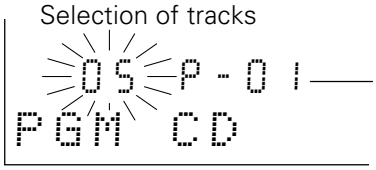
2 Select track numbers in the order you want to play them.



❶ Select the track.



Selection of tracks



Program position of the track to be selected next.

Press the numeric keys as shown below....

To select track No. 23 : [+10] [+10] [3]

To select track No. 40 : [+10] [+10] [+10] [+10] [0]

(Go to step ❷ within 8 seconds.)

❷ Confirm the selection.

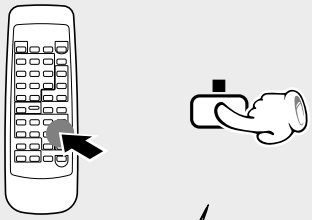
(To select more than one track, repeat steps ❶ and ❷ for each track.)

- Up to 32 tracks can be programmed. When **"FULL"** is displayed, no more tracks can be programmed.
- If you made a mistake, press the **CLEAR** key and enter the track No. again.
- When a track No. is entered, the track will be added to the end of the existing program.
- **"– – : – –"** is displayed when the total programmed period has attained 100 minutes or more.

3 Start playback.

- Tracks will be played in the order they were programmed (following the program numbers).
- When the I◀◀ or the ▶▶I key is pressed during play, the program will jump to the preceding or the following track respectively.
- When the I◀◀ key is pressed once during playback, the play position returns to the beginning of the current track being played.

To stop playback



To quit the program mode

Clearing tracks from the end

Press in stop mode

(P-14 has been deleted.)

- Each time the key is pressed, the last track in the program is cleared.

Clearing all tracks

Press in stop mode

Goes off

- The entire program is cleared.

Repeated playback

You can repeatedly listen to a favorite track or disc.

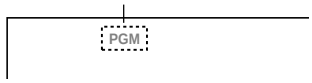
Select the "CD" input.

Setup for repeating a single track

❶ Confirm that the "PGM" indicator is not lit.

(If the "PGM" indicator is lit, press the PGM key to turn it off.)

Confirm that this is not lit.



❷ Select "REPEAT".

Each press switches the repeat mode.
① REPEAT
② REPEAT ALL
③ Off.... Repeat deactivated

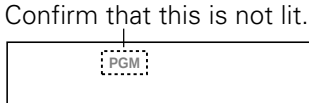
Lights

Setup for repeating all tracks in a disc

❶ Confirm that the "PGM" indicator is not lit.

(If the "PGM" indicator is lit, press the PGM key to turn it off.)

Confirm that this is not lit.



❷ Select "REPEAT ALL".

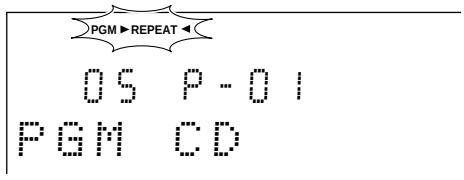
Each press switches the repeat mode.
① REPEAT
② REPEAT ALL
③ Off.... Repeat deactivated

Lights

Setup for repeating selected tracks

❶ Program the track sequence according to steps ❶ to ❷ of "Listening in the desired sequence". →24

"REPEAT", "PGM" light.



❷ Select "REPEAT".

● All selected tracks will be repeated.

Start playback

To stop repeated playback

Press the REPEAT key repeatedly until the repeat mode is switched off.

● The **"REPEAT"** or **"REPEAL ALL"** indicator turns off and playback according to the current CD player mode starts.

Listening to an unexpected title sequence (random playback)

As the titles each time are selected randomly, the music can be enjoyed without getting tired of it.

Select the "CD" input.

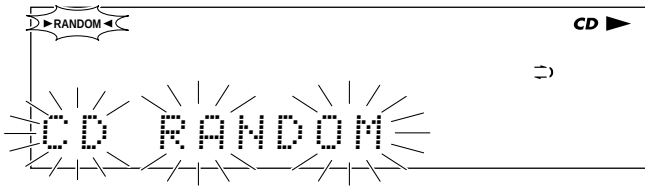
1 Confirm that the "PGM" indicator is not lit.

(If the "PGM" indicator is lit, press the PGM key to turn it off.)

Confirm that this is not lit.

2 Press the RANDOM key.

Each press switches the modes as follows.
① "RANDOM" on ... Random playback
② "RANDOM" off ... Normal playback



- Playback stops after each title has been played once.
- The random playback can also be repeated by pressing the **REPEAT** key.

To select another track in the middle of playing one

- Pressing the ⏮ key once returns to the beginning of the track being played.

To cancel random playback

Press so that the "RANDOM" indicator goes off.

- The **"RANDOM"** indicator goes off and the playback in order of the tracks starts from the track being played.

In regard to the DOT DISP. key

When a title recorded in a CD-TEXT disc is too long to be displayed in the dot display, press this key to scroll the display and view the characters which has not be displayed.

(When pressed during stop)

Scrolls the disc title display.

(When pressed during playback)

Scrolls the track title display.

R.D.S. (Radio Data System) (Except for some areas)

RDS is a system which transmits useful information (digital data) for FM broadcasts together with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions such as automatic display of the station name.

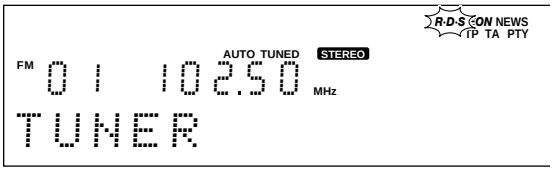
This unit is equipped with the following functions utilizing RDS data :

PTY (Program Type Identification) Search : →29
The tuner automatically searches for a station which is currently broadcasting a specified program type (genre).

PS (Program Service Name) Display :
When an RDS broadcast is received, the station name is automatically displayed.

EON (Enhanced Other Network) : →31
When the information to be received is set in advance and any RDS station in the same network starts broadcasting of such information, the reception automatically will be switched to that station.

The **"RDS"** indicator lights up when an RDS broadcast (signal) is received.



- Some functions may not be provided or be given different names depending on countries or areas.

Before using RDS

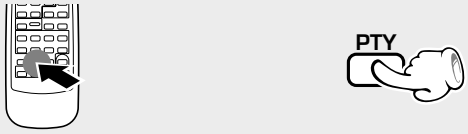
For reception of RDS stations, the auto presetting function must be used to preset the stations. With the auto presetting function, RDS stations are preset with priority. "NO DATA" will be flashed when a station is not preset by auto presetting.

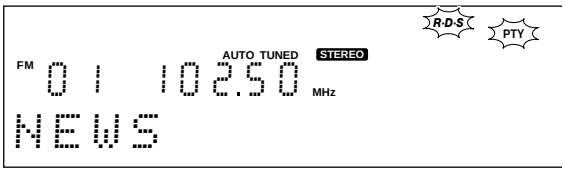
Searching for a desired program type (PTY search)

By specifying the type of program (genre) you want to listen to, the tuner automatically searches for a station which is currently broadcasting a program of the specified type.

Set the reception band to FM. Preset RDS stations with the auto preset function. →21

1 Select the PTY search mode.



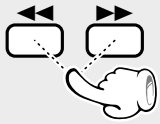


When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "NONE" is displayed.

2 Select the desired program type.

Use program type table on the right for your convenience.

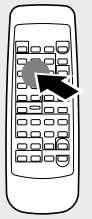
Ⓐ **Selection with the ◄◄ ►► keys**

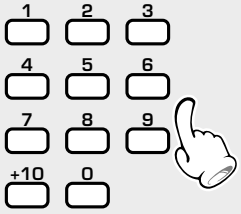


Select while **"PTY"** is lit.

The desired program type can be selected with the ◄◄ ►► keys from 29 types. Press the key and release it when the desired type is displayed.

Ⓑ **Selection with the numeric keys**





The program types 1 to 9 and 0 can be selected directly with the number keys.
Use the ◄◄ ►► keys to select other program types.

Program type table

Ⓐ ◄◄ ►► keys	Ⓑ	Program Type Name	Display
◄◄ DOWN	1	Pop Music	POP M
	2	Rock Music	ROCK M
	3	*M.O.R. Music	M.O.R. M
	4	Light Classical	LIGHT M
	5	Serious Classical	CLASSICS
	6	Other Music	OTHER M
	7	News	NEWS
	8	Current Affairs	AFFAIRS
	9	Information	INFO
UP ►►	0	Sport	SPORT
		Education	EDUCATE
		Drama	DRAMA
		Culture	CULTURE
		Science	SCIENCE
		Varied	VARIED
		Weather	WEATHER
		Finance	FINANCE
		Children's programs	CHILDREN
		Social affairs	SOCIAL A
		Religion	RELIGION
		Phone in	PHONE IN
		Travel	TRAVEL
		Leisure	LEISURE
		Jazz music	JAZZ
		Country music	COUNTRY
		National music	NATION M
		Oldies music	OLDIES
		Folk music	FOLK M
		Documentary	DOCUMENT

*M.O.R. Music (Middle of the Road Music)

3 Start the search.

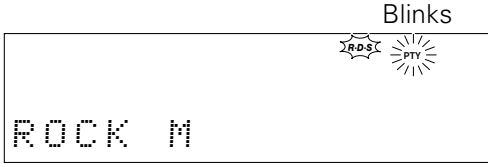
- No sound is heard while **"PTY"** is blinking.
- If a program of the desired type cannot be found, **"NO PROG"** is displayed, then after several seconds the display returns to the original display.
- If a program of the desired type is found, that program is received and the program type name display changes temporarily to the station name display.

To change to a different program type :

Repeat steps 1, 2, 3.

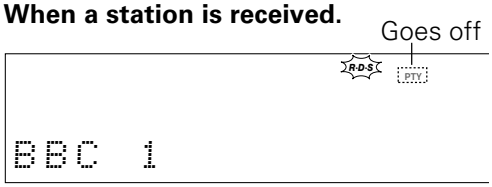
When searching for a Rock Music broadcast

Display while the tuner is searching.



Program type name display.

When a station is received.



Station name display.

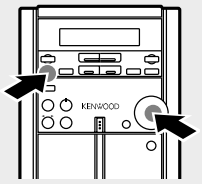
HM-331 (En/T)

To be able to listen to the desired information at any time (EON)

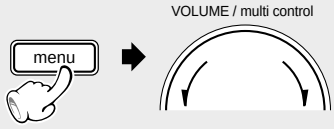
By using the EON function, which manages the information of other stations, listening to desired information like traffic information or news etc. can be reserved even when it is not being transmitted at the present. When listening to a station with the "EON" display lit and another station of the same network starts to broadcast an information program for which a reservation has been made, then that station will be selected automatically. When the desired information program ends, return is made to the original program.

Set the reception band to FM. → 20

1 Auto preset the stations.



❶ **Receive a broadcast.**
❷ **Select "A. MEMORY (or A.PRESET) ?".**



❸

(Press the "set/demo" key while the "?" mark is blinking.)

The EON data presently being broadcasted are taken in automatically.

This is not required when auto presetting has already been executed. → 21

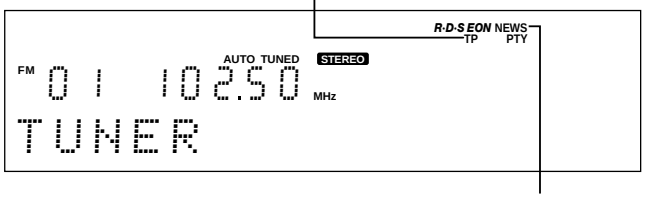
- When all 40 stations have already been preset by the procedure for **"One-by-one presetting (manual preset)"**, the EON function will not operate. Auto presetting must be used.

2 Select the desired information.

Each press switches the modes as follows.

→ ① **TA ..... Traffic Announcement**
② **NEWS ..... News**
③ **TA/NEWS ..... Traffic Announcement/ News**
④ **Display not lit ..... EON cancelled**

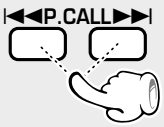
This lights when a station transmits traffic information.



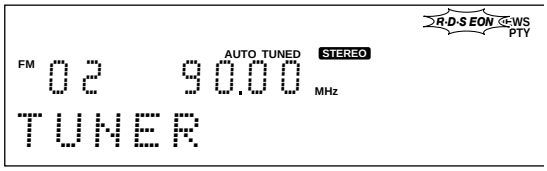
Lights when **"NEWS"** is selected.

3 Receive an RDS station.

Select a station where "RDS" and "EON" are lit.



"RDS" and **"EON"** are lit.



- When **"EON"** does not light although an RDS station is received, that station is not transmitting EON data. Please select a different station.
- When TA is desired, select a station where the **"TP"** display lights.

4 Wait for the desired information.

CD or TAPE playback may also be started.
As long as the unit is ON, the unit is always ready for the reception.

- When one of the stations of the network of the station received in 3 starts broadcasting the program contents selected in 2, that station will be received automatically. At this time, Tape playback will stop and CD playback will pause. However, external equipment (AUX) will remain as it is.
- When the unit is OFF or during recording (including dubbing), the EON function does not operate.
- When the transmission of the selected program contents ends in case of automatic reception with the EON function, return will be made to the status directly before operation of the EON function. When CD or TAPE playback has been interrupted, it will be continued from the point of interruption.

In case of waiting for information with an RDS station without EON function

When there is no "EON" display with the operations of steps 3 and 4 and the desired information is selected in advance, waiting for the desired information will be done only with the presently received RDS station.

In regard to TP (Traffic Program) indicator

When the "TP" indicator is lit, this indicates that the station or another station in the same network is broadcasting traffic information. Even without an EON reservation, traffic information can be heard from the station when "TP" indicator is lit for the presently received station.

Selection of the Recording Type

This unit provides the following recording features in addition to normal recording. Select the appropriate method according to the purpose of recording.

Note that this cassette deck cannot record onto Metal tapes.

To record CD with a simplified method

One-touch recording (CD→TAPE)

→ 34

***One-touch recording** (all-track recording)*	**One-touch recording of an entire CD onto a tape.**
***One-touch recording** (single-track recording)*	**One-touch recording of the CD track being played onto a tape. (This is convenient for recording of desired tracks from a disc being heard for the first time.)**

To record desired CD tracks by reordering them

Program recording (CD→ TAPE)

→ 35

Program recording	**Recording of programmed tracks in the programmed order. (Convenient for recording only the desired CD tracks in the desired order.)** **Program recording can be used in combination with the "One-touch recording" .**

With recording onto tape, the track will be interrupted for the part of the guide tape at the tape reversal, where recording is not possible. Please use single-side recording if this is to be avoided.

One-touch recording (CD→TAPE)

The one-touch recording can record all tracks in a CD with a one-touch operation (all-track recording). It can also record the current CD track being played from the beginning (single-track recording).

Be sure to put the cassette deck in stop mode

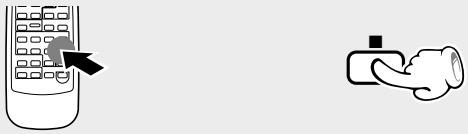
1 Make the preparations for recording.

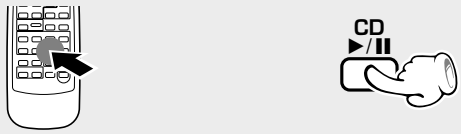
CD → TAPE

❶ **Perform steps 1. to 3. of the procedure in "Recording on TAPE".** → 22
❷ **Insert disc in the CD player.**

2 Check the current play mode of the CD player.

One-touch recording (all-track recording)	*One-touch recording (single-track recording)*
If it is in play mode, stop it.	**Select the desired CD track and play it.**





To record other tracks using **"one-touch recording (single-track recording)"**, repeat steps 2 and 3 for each track.

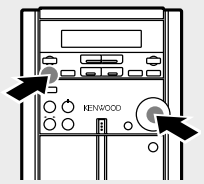
3 Start recording.

Remote comtrol unit

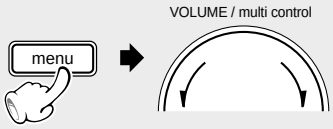
❶ **Press the TAPE O.T.E. key.**

- When the **TAPE O.T.E.** or **"set/demo"** key is pressed for **"One-touch recording (single-track recording)"**, the CD track being played is replayed from the beginning and recording start at the same time.

Main unit



❶ **Select "O.T.E. ?".**



❷ **Start recording.**

To interrupt a recording

(Recording and playback will be stopped.)

At the end of the recording

Cassette deck : Stop is executed after an unrecorded portion of about 4 sec. has been produced.

Program recording (CD → TAPE)

Desired CD tracks can be programmed in the desired sequence and recorded onto a tape.

Recording preparation is required. →22
(Be sure to put the cassette deck in stop mode.)

1 Program the desired sequence of CD tracks.

CD → TAPE

Perform steps 1 and 2 of the procedure in "Listening in the desired sequence (Program playback)". →24

- When the **PGM** key is pressed to cancel the edited contents, the entire editing contents will be erased.
- Tracks programmed in excess of the tape recording time will be cut off.

2 Start recording.

- Recording of the programmed tracks in the programmed order starts.
- To perform operation on the main unit, see step 3 in the procedure in **"One-touch recording"**. →34

To interrupt a recording

(Recording and playback will be stopped.)

At the end of the recording

Cassette deck : Stop is executed after an unrecorded portion of about 4 sec. has been produced.

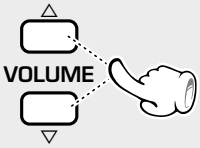
Tone adjustment

The lowest and highest frequency bands can be adjusted independently. (Remote control only)

❶ Select the frequency band.

(Go to step ❷ within 5 seconds.)

❷ Adjust.

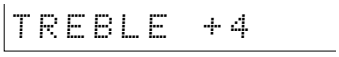


(To adjust the other frequency band, repeat steps ❶ and ❷ for it.)

Each press switches the operation.

- ① **"BASS" (low frequency) adjustment**

- ② **"TREBLE" (high frequency) adjustment**



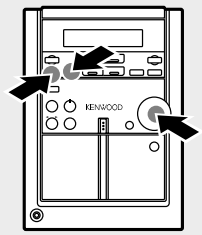
- ③ **Normal mode**

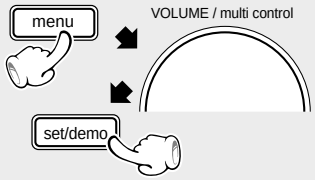
- The levels of both **"BASS"** and **"TREBLE"** can be adjusted in 2 steps in the range between -8 and +8.
- Adjusting the tone while the **"LOUD"** or **"EX.BASS"** indicator is lit turns it off and cancels the sound enhancement mode.

Balance adjustment *(Adjust for the desired left / right balance.)*

Adjusts the balance of left and right volume. (Main unit operation only)

1 *Select "BALANCE ?".*



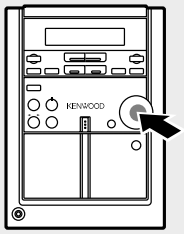


(Press the "set/demo" key while the "?" mark is blinking.)

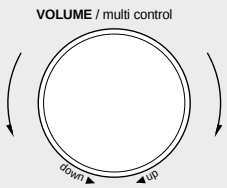
Turning the knob switches the function as shown in the character information display.

- **TAPE RVS. ?**
- **O.T.E. ?**
- **A. MEMORY (or A. PRESET) ?**
  (Only when the TUNER input is selected)
- **AUX LEVEL ?**
  (Only when the AUX input is selected)
- **BALANCE ?**
- **TIMER SET ?**
- **A.P.S. SET ?**

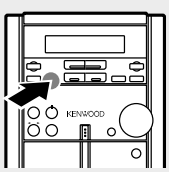
2 *Adjust.*



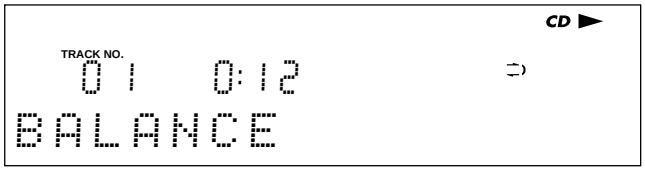
❶



The right volume is decreased. **The left volume is decreased.**



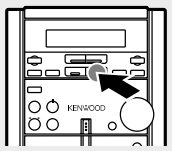
❷ **Set it.**



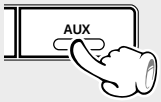
Adjusting the AUX Input Level

This adjusts the input level for the external equipment (video deck etc.) connected to the AUX input terminal. Adjust so that the volume of the AUX input source sounds at an equivalent level to the CD . (Main unit operation only)

1 Select AUX (external input).

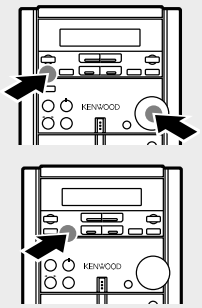


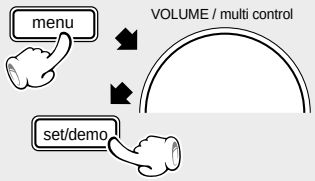
❶ **Select AUX (external input).**



❷ **Play the connected equipment.**

2 Select "AUX LEVEL ?".





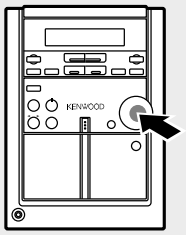
(Press the "set/demo" key while the "?" mark is blinking.)

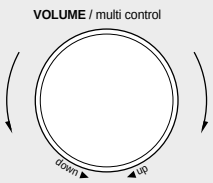
Turning the knob switches the function as shown in the character information display.

- **TAPE RVS. ?**
- **O.T.E. ?**
- **A. MEMORY (or A. PRESET) ?**
  (Only when the TUNER input is selected)
- **AUX LEVEL ?**
  (Only when the AUX input is selected)
- **BALANCE ?**
- **TIMER SET ?**
- **A.P.S. SET ?**

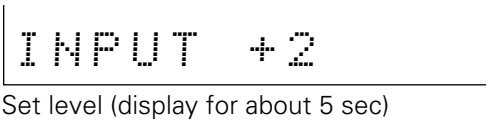
3 Adjust.

❶ **Adjust the input level.**



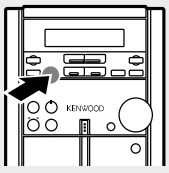


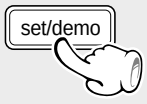
The level decreases. **The level increases.**



Set level (display for about 5 sec)

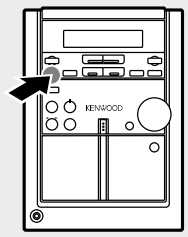
❷ **Set it**



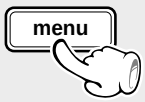


- Adjust the input level while **"INPUT"** is displayed.
- Adjustment is possible over the range from -6 to +3.

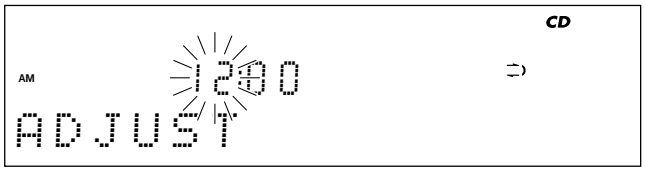
1 Activate the clock adjustment mode.



(Hold for more than 2 sec.)

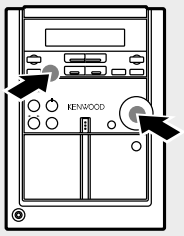


- The **"CLOCK"** display starts to blink during time setting.

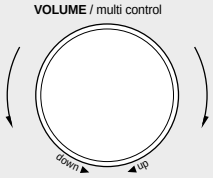


- The time display starts to blink.

2 Enter the figure of hour.



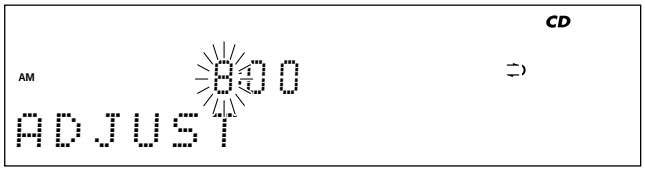
❶



To decrease hour — **To increase hour**

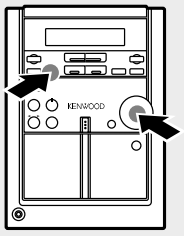
❷ **Set it.**

Example: Adjustment to 8:07

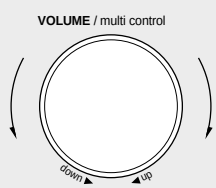


- The time of the day is represented in 12-hour AM/PM method.
- Press the **"set/demo"** key. The hour is entered and the minute display starts to blink.

3 Enter the figure of minute.



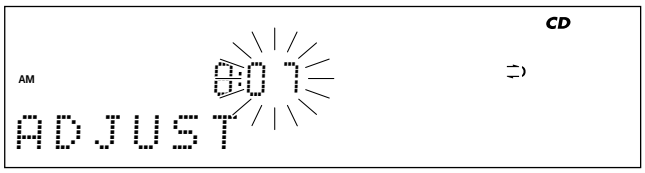
❶



To decrease minute — **To increase minute**

❷ **Set it.**

Example: Adjustment to 8:07



- If you make a mistake, restart from the beginning.
- To adjust correct time, press the **"set/demo"** key at the same moment as a time announcement.
- After a power failure or the power cord has been unplugged then plugged in again, it is required to set the time again.
- When the time of day has been set by pressing the **"set/demo"** key, the display shows **"COMPLETE !"**.

Timer operation

HM-331 (En/T)

Operate easy To use Timer (O.T.T.)

Playback of the selected input source starts at the specified time, and the unit is switched off after one hour. This timer operates only once directly after setting.

Timer playback, timer recording (PROG.1, PROG.2)

With each of the two timer programs, a selected source can be played (or radio broadcast can be recorded) in the previously set time period.

AI timer playback (PROG.1, PROG.2)

The volume increases gradually after start of timer playback.

Sleep timer (SLEEP)

The unit is turned OFF automatically after the specified period has elapsed.

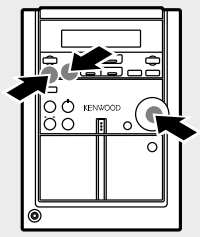
Connect the related equipment under reference to "System connection". → 6

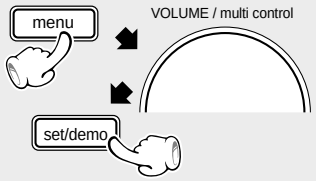
Setting the O.T.T.

Timer playback is possible simply by setting the time.
The source selected last before the unit was switched off will be played. One hour after start of timer playback, the unit will be switched off automatically.

❶ Select the source to be played.

❷ Select "TIMER SET ?" .



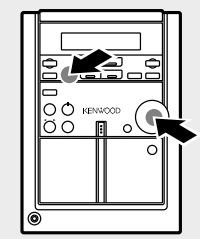


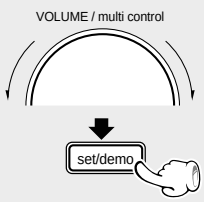
(Press the "set/demo" key while the "?" mark is blinking.)

Turning the knob switches the function as shown in the character information display.

- **TAPE RVS. ?**
- **O.T.E. ?**
- **A. MEMORY (or A. PRESET) ?**
  (Only when the TUNER input is selected)
- **AUX LEVEL ?**
  (Only when the AUX input is selected)
- **BALANCE ?**
- **TIMER SET ?**
- **A.P.S. SET ?**

❸ Select "O.T.T. SET ?" .

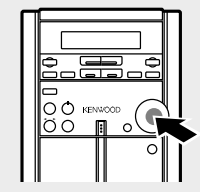


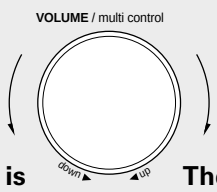


Turning the knob switches the function as shown in the character information display.

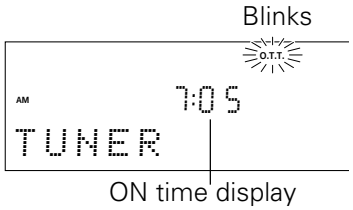
- **① O.T.T. SET ?**
- **② PROG. 1 SET ?**
- **③ PROG. 2 SET ?**

❹ Set the ON time.



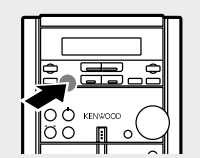


The time is returned. **The time is advanced.**



- The ON time can be set in steps of 5 minutes.
- When the O.T.T. has been set by pressing the **"set/demo"** key, the display shows **"COMPLETE !"**.

❺ Set it.



To execute O.T.T.

Perform steps ❶ and ❷ in the procedure in "Activating or deactivating the O.T.T. or program timer execution". → 42

Setting the Program Timer

Two 24-hour timer systems (PROG.1, PROG.2) (which can be used every day) are available.
In each of PROG.1 and PROG.2, the timer data including the operating period and played contents can be set and selected to be activated or not as required.

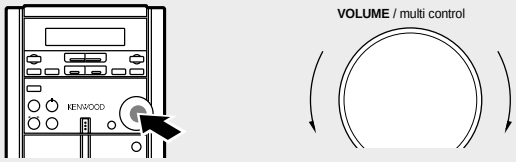
1 Make preparations for the play (recording).

To listen to CD	To listen to tape
Insert a disc. **(Program playback is not possible.)**	**Set a tape into.**

To listen to radio	Playing the auxiliary input source	For recording
The station should be preset prior to the above. → 21	**Make timer setting of the component connected to the AUX input jacks.**	**Make preparations for recording.** **TAPE** → 22

- Timer reservation is possible for the two types PROG.1 and PROG. 2 at the same time.
- Please make reservations with an interval of at least one minute, so that the operation times of PROG. 1 and PROG. 2 do not overlap.

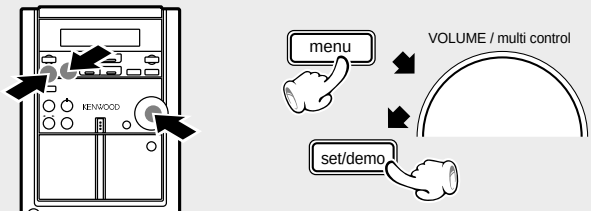
2 Adjust the listening volume.



- When the power is switched on by the timer for recording, MUTE automatically becomes ON.

3 Select a program No.

❶Select "TIMER SET ?".

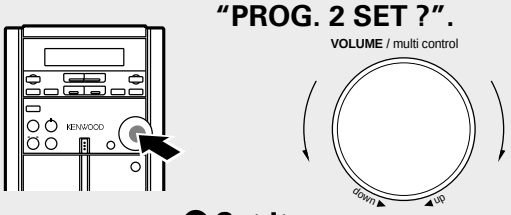


(Press the "set/demo" key while the "?" mark is blinking.)

Turning the knob switches the function as shown in the character information display.

- **TAPE RVS. ?**
- **O.T.E. ?**
- **A. MEMORY (or A. PRESET) ?**
  (Only when the TUNER input is selected)
- **AUX LEVEL ?**
  (Only when the AUX input is selected)
- **BALANCE ?**
- **TIMER SET ?**
- **A.P.S. SET ?**

❷Select "PROG. 1 SET ?" or "PROG. 2 SET ?".



Turning the knob switches the function as shown in the character information display.

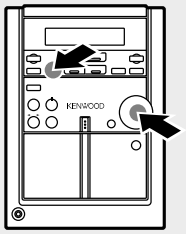
- ① **O.T.T. SET ?**
- ② **PROG. 1 SET ?**
- ③ **PROG. 2 SET ?**

❸Set it.

(Press during display of the program contents.)

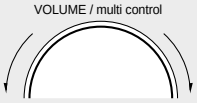
- The selected program No. lights.
- If a program No. under which a timer program has already been reserved, it is replaced by the new timer program.
- The previously set contents are displayed. (If you do not want to change them, simply press the **"set/demo"** key.)

4 Set the ON time then the OFF time.

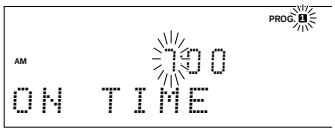


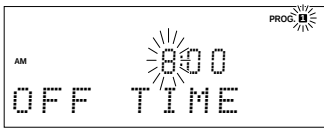
❶ **Adjust the time.**

The time is returned. **The time is advanced.**



❷ **Set it.**





- For each of the ON time and OFF time, enter the figure of "hour" by performing steps ❶ and ❷ then enter the figure of "minute" in the same manner.
- If you make a mistake, restart from step 3.

5 Make the desired reservation.

For timer playback or AI timer playback

❶ **Select the mode.**
(1) Select "PLAY" or "AI PLAY".

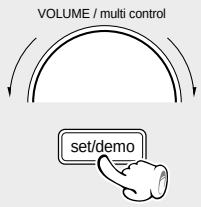
(2) Enter it.

- ① **PLAY**..... **Timer play**
- ② **REC**
- ③ **AI PLAY**..... **Timer play with gradually increasing volume**

❷ **Select the input source.**
(1) Select the source to be played.

(2) Enter it.

- ① **TUNER** ..... **Broadcasts**
- ② **CD**
- ③ **TAPE**
- ④ **AUX** ..... **External input (video, etc.)**

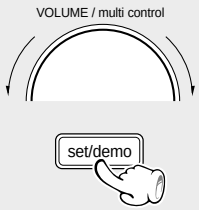


❸ **Select the broadcast station (only when TUNER is selected above).**
(1) Select the preset station No.

(2) Enter it.

- When the O.T.T. has been set by pressing the **"set/demo"** key, the display shows **"COMPLETE !"**.

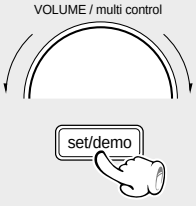
For timer recording



❶ **Select the mode.**
(1) Select "REC".

- ① **PLAY**
- ② **REC**
- ③ **AI PLAY**

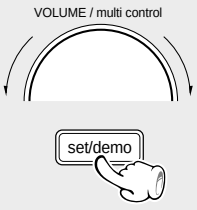
(2) Enter it.



❷ **Select the input source.**
(1) Select what is to be recorded.

- ① **TUNER** ..... **Broadcasts**
- ② **AUX** ..... **External input**

(2) Enter it.



❸ **Select the broadcast station (only when TUNER is selected above).**
(1) Select the preset station No.

(2) Enter it.

- When the O.T.T. has been set by pressing the **"set/demo"** key, the display shows **"COMPLETE !"**.

To execute program timer

Perform steps 1 and 2 in the procedure in "Activating or deactivating the O.T.T. or program timer execution".

→ 42

Activating or deactivating the O.T.T. or program timer execution

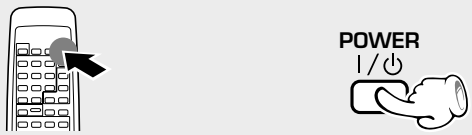
1 *Select the timer program No. to be used. (Remote control unit only)*

Each press of the key switches the program numbers as follows.

①O.T.T. ..... Executes O.T.T. only.
②PROG.1 ..... Execution of program 1 only.
③PROG.2 ..... Execution of program 2 only.
④PROG.1, 2 .. Execution of programs 1 and 2.
⑤Off ..... Timer off.

- The selected program No. lights.
- The timer will not function unless a program No. is selected.

2 *Put the unit in standby mode.*

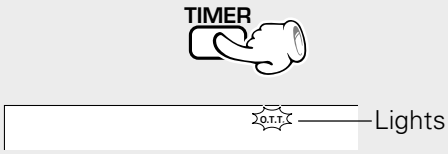


- The standby/timer indicator lights in orange in standby mode.

To set the same timer program again

Press so that the desired PROG. indicators lights.

Press while power is ON.

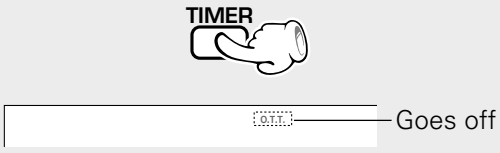


- Be sure to load a disc or tape and adjust the listening volume.

When timer operation is not required

Press so that all PROG. indicators are OFF.

Press while power is ON.



- The reservation contents are held in memory.

To check or modify the reservation contents, restart the timer reservation from the beginning.

Sleep timer (SLEEP)

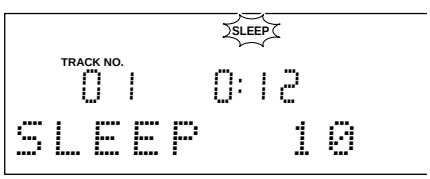
Set the number of minutes after which the unit is to be turned OFF.

Set the time.

- The unit is turned OFF automatically after the set time has elapsed.
- Each press increases the timer period by 10 minutes. The sleep timer can be set up to 90 minutes.

10→20→30...70→80→90→Cancel→10→20...

Lights



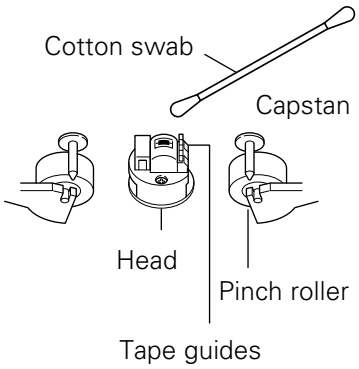
Duration for sleep timer

To cancel

Turn the unit OFF or press the SLEEP key until the sleep time is cancelled.

Maintenance

Cleaning the head section



Cleaning the heads and peripheral components

For maintaining the best condition of the deck and for longer service life, always keep the heads (recording / playback / erase), capstan and pinch roller clean.
To clean them, perform the following:

1. Open the cassette holder.
2. Using a cotton swab dipped in alcohol, clean the head (recording / playback / erase), capstan and pinch roller carefully.

Demagnetizing the head

When the recording / playback head is magnetized, the sound quality will deteriorate. In such a case, demagnetize the head using a commercially available demagnetizer (head eraser).

Note: There are precisely aligned parts around the heads, including the tape guides. When cleaning, pay special attention so as not to apply shock to them.

Maintenance of the Set

When the front panel, the case, etc. becomes dirty, wipe with a soft, dry cloth. Do not use thinner, alcohol, etc., as these can cause discoloration.

In regard to contact cleaners

Do not use contact cleaners because it could cause a malfunction. Be specially careful not to use contact cleaners containing oil, for they may deform the plastic component.

Reference

Caution on condensation

Condensation (of dew) may occur inside the unit when there is a great difference in temperature between this unit and the outside.
This unit may not function properly if condensation occurs. In this case, leave the unit for a few hours with the power left ON, and restart the operation after the condensation has dried up.

Be specially cautious against condensation in a following circumstance:

When this unit is carried from a place to another across a large difference in temperature, when the humidity in the room where this unit is installed increases, etc.

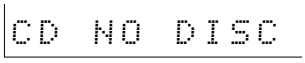
Note related to transportation and movement

Before transporting or moving this unit, carry out the following operations.

❶ Remove the CD from the unit.

❷ Press the ►/II key of the CD.

❸ Wait for some time and verify that the display becomes as shown in the figure.



❹ Wait a few seconds and turn the unit OFF.

Memory backup function

Stored contents which are cleared immediately when power plug is unplugged from power outlet	Clock display
Stored contents which are cleared in at least a day after power plug is unplugged from power outlet	**Amplifier section** "on/standby" status (ON or STANDBY) Last input selection Volume control value Tone control levels AUX input level Balance setting **Tuner section** Receiving band Frequency Preset stations Auto/mono setting Program timer setting contents **Cassette deck unit** Transport direction "tape EQ." Reverse mode

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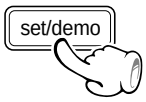
What seems to be a malfunction is not always so. Before calling for service, check the following table according to the symptom of your trouble.

Operation to reset

The microcomputer may fall into malfunction (impossibility to operate, erroneous display, etc.) when the power cord is unplugged while unit is ON or due to an external factor. In this case, execute the following procedure to reset the microcomputer and return it to normal condition.

- Please note that resetting the microcomputer clears the contents stored in and it returns to condition when it left the factory.

Unplug the power cord from the power outlet then, while holding the "set/demo" key depressed, plug the power cord again.



Amplifier section/Speakers

Symptom	Cause	Remedy
Sound is not produced.	● The speaker cords are disconnected. ● The volume control is set to the minimum position. ● The **MUTE** key of remote control unit is switched ON. ● The headphone plug is inserted into the jack. ● The speaker cords are short-circuited.	● Connect properly referring to **"System connection"**. → 6 ● Adjust to an required volume. ● Switch **MUTE** OFF. → 15 ● Unplug the headphone plug. ● Turn the unit OFF, remove the short-circuit and turn the unit ON again.
No sound from the headphones.	● Imperfect insertion.	● Insert correctly. → 15
Sound is not produced from the left or right speakers.	● The speaker cords are disconnected. ● The BALANCE is set completely to the left or right channel.	● Connect properly referring to **"System connection".** → 6 ● Adjust the optimum left and right balance. → 36

Tuner section

Symptom	Cause	Remedy
The clock display blinks without changing the figures.	● There was a power failure. ● The power cord was unplugged from the outlet.	● Adjust the present time again. → 38 ● Adjust the present time again.
Timer operation is not possible.	● The present time has not been adjusted or there was a power failure. ● The timer ON time and OFF time have not been set. ● The timer execution was not set up.	● Adjust the present time referring to **"Clock adjustment"**. ● Set the timer ON time and OFF time. → 41 ● Press the **TIMER** key to set up the execution.
Radio stations cannot be received.	● The antennas have not been connected. ● A proper broadcasting band has not been selected. ● The frequency of the station to be received is not tuned.	● Connect antennas. → 6 ● Select a band. → 20 ● Tune to the frequency of the desired station.
Noise interferes.	● Car ignition noise. ● Influence of an electric appliance. ● A TV set is installed near the system.	● Install the outdoor antenna in an apart position from the road. ● Switch the suspected electric appliance OFF. ● Install the TV or the system at an increased distance between them.
A station has been preset but it cannot be received by pressing the P.CALL key.	● The frequency of the preset station is not tunable. ● The preset memory has been cleared because the power cord has been unplugged for a long period.	● Preset stations with tunable frequencies. ● Preset stations again. → 21

CD player section

Symptom	Cause	Remedy
A CD is placed in the player but it cannot be played.	● The disc is placed upside down. ● The disc position is displaced. ● The disc is extremely dirty. ● The disc is scratched. ● Dew is condensed on the optics lens.	● Place the disc properly, with the label side facing upward. ● Place the disc properly. ● Clean the disc referring to **"Disc handling precautions"**. → 5 ● Try another disc. ● Refer to **"Caution on condensation"** and remove the condensation by evaporation. → 43
Sound is not produced.	● The disc has not been placed. ● The player is not put to the play mode. ● The disc is extremely dirty. ● The disc is scratched.	● Place a disc in the CD player. ● Press the ▶/II key. ● Clean the disc referring to **"Disc handling precautions"**. → 5 ● Try another disc.
Sound skips.	● The disc is dirty. ● The disc is scratched. ● The player is subject to vibration.	● Clean the disc referring to **"Disc handling precautions"**. → 5 ● Try another disc. ● Install the unit in a place not subject to vibrations.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	● Batteries are exhausted. ● The remote control is too far away from the system, the controlling angle is deviated or there is an obstacle in between. ● The component to be played is not loaded with a CD or cassette tape.	● Replace with new batteries. → 13 ● Operate the unit inside the remote controllable range. → 13 ● Load a CD or cassette tape in the component to be played.

Cassette deck

Symptom	Cause	Remedy
Sound cannot be produced by pressing the play key.	● The head is dirty. ● The tape is wound too tight due to irregular winding. ● A nonrecorded tape is played.	● Clean the head referring to **"Maintenance"**. → 43 ● Try another tape. ● Play a recorded tape.
No operation occurs even when an operation key is pressed.	● The cassette holder is not closed completely. ● The operation key is pressed immediately after closing the cassette holder. ● The operation key is pressed in less than 4 seconds after turning the power ON. ● A tape is not inserted in the unit. ● The tape is wound too tight due to irregular winding. ● The tape is fully wound to one of the reels.	● Close the holder completely. → 18 ● Press operation keys in more than a few seconds after closing the cassette holder. ● Press operation keys after waiting for more than 4 seconds. ● Insert a tape. → 18 ● Try another tape. ● Change the tape transport direction or reverse the tape insertion orientation. → 18
The cassette holders cannot be opened by pressing the "⏏ push OPEN" area.	● The key is pressed during recording or playback. ● The microcomputer is malfunctioning due to external noise.	● Press in stop mode. ● Reset the microcomputer. → 44
Sound is harsh or high frequencies are not reproduced.	● The head is dirty. ● The tape is stretched or shrunk.	● Clean the head referring to **"Maintenance"**. → 43 ● Try another tape.
Sound is distorted.	● The recording level has not been adjusted. (During AUX input operation) ● The tape being played was recorded with distorted sound.	● Adjust the AUX input level. ● Try another tape.
Noise is noticeable.	● The tape head is magnetized. ● External noise is induced. ● A tape recorded with Dolby NR ON is played with "**tape EQ.**" off.	● Demagnetize the head referring to **"Maintenance"**. → 43 ● Install the system at a distance from other electric appliances and TV. ● Set the "**tape EQ.**" to on. → 19
Sound vibrates.	● The capstans or pinch rollers are dirty. ● The tape is wound irregularly.	● Clean the head referring to **"Maintenance"**. → 43 ● Wind the tape again by fast forwarding, rewinding or playing from an end to the other. → 19
Recording cannot be started by pressing the record key.	● The recording protect tab of the cassette has been broken. ● The cassette holder is not closed completely. ● The **TAPE** input is selected. ● The tape is fully wound to one of the reels.	● Use a cassette with an unbroken recording protect tab or block the hole. → 5 ● Close the holder completely. → 18 ● Set the input selector to the source to be recorded. → 23 ● Change the tape transport direction or reverse the tape insertion orientation. → 18

Main unit

[Amplifier section]

Effective output power during STEREO operation
1 kHz, 10 % T.H.D., at 6 Ω ..... 15 W + 15 W
Rated output power during STEREO operation
Other countries
1 kHz, 0.7 % T.H.D., at 6 Ω ..... 12 W + 12 W
Frequency response
AUX ..... 20 Hz~20 kHz (0 dB ~ -3dB)

[Tuner section]

FM tuner section
Tuning frequency range ..... 87.5 MHz ~ 108 MHz

MW (AM) tuner section
Tuning frequency range
9 kHz step ..... 531 kHz ~ 1,602 kHz
10 kHz step ..... 530 kHz ~ 1,610 kHz

[CD player section]

Laser ..... Semiconductor laser
D/A Conversion ..... 1 Bit
Frequency response ..... 20 Hz~20 kHz
Wow and flutter ..... Less than unmeasurable limit

[Cassette deck section]

Track ..... 4-track, 2-channel stereo
Recording system ..... AC bias system
(Frequency: 65 kHz)
Heads
Playback / recording head 1
Erasing head 1
Motors 1
Wow and flutter ..... 0.2 % (W.R.M.S.)
Fast winding time ..... Approx. 100 seconds
(C-60 tape)

[General]

Power consumption ..... 36 W
Dimensions ..... W : 180 mm
H : 257 mm
D : 275 mm
Weight (net) ..... 5.1 kg

Speakers

Enclosure ..... Book shelf type, magnetically shielded
Speaker configuration
Woofer ..... 100 mm, cone type
Tweeter ..... 50 mm, cone type
Impedance ..... 6 Ω
Maximum input level ..... 20 W
Dimensions ..... W : 150 mm
H : 255 mm
D : 240 mm
Weight (net) ..... 2.4 kg(1 piece)

Notes

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

- Sufficient performance may not be exhibited at extremely cold locations (where water freezes).

KENWOOD

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____